NATIONAL GEOGRAPHIC

NEW!

HISTORY

ROME
FROM MYTH TO EMPIRE

ROSETTA STONE
RACE TO CRACK A PHARAOH'S CODE

KNIGHTS TEMPLAR
CHRIST'S WARRIORS

TIKAL
LOST CAPITAL OF THE MAYA

PLUS:

- PIRATES OF THE MEDITERRANEAN
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JAMESTOWN 1619
SOWING THE SEEDS OF DEMOCRACY

JUNE / JULY 2015

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NATIONAL GEOGRAPHIC

I am lucky enough to spend a considerable amount of time in the British Museum, where I regularly walk past the Rosetta stone—the subject of one of this month's feature articles. Even on quiet days there is always a noticeable crowd several persons deep jockeying for a view of this famous Egyptian artifact. Though the stone is both elegant and somewhat hypnotic, it is the aura of mystery and intrigue around the stone that makes it stand out as something special amid the many other more visually striking treasures that surround it. The Rosetta stone was at the heart of something like a 19th-century space race between two of the great superpowers of the age: Britain and France. Who would crack the code and be the first to read Egyptian hieroglyphs? At stake was national pride—and perhaps a validation of their political systems, which at the time were violently opposed. And once translated, thanks to both British and French efforts, it unlocked the long-lost lives of the pharaohs and fueled the global fascination for ancient Egypt. This is why visitors to the museum see more than a mere object: it is the story behind the stone that makes it such a compelling piece of history.

Jon Heggie

Jon Heggie, Managing Editor

PHOTO: GIOVANNI SIMEONE/FOTOTECA 9X12

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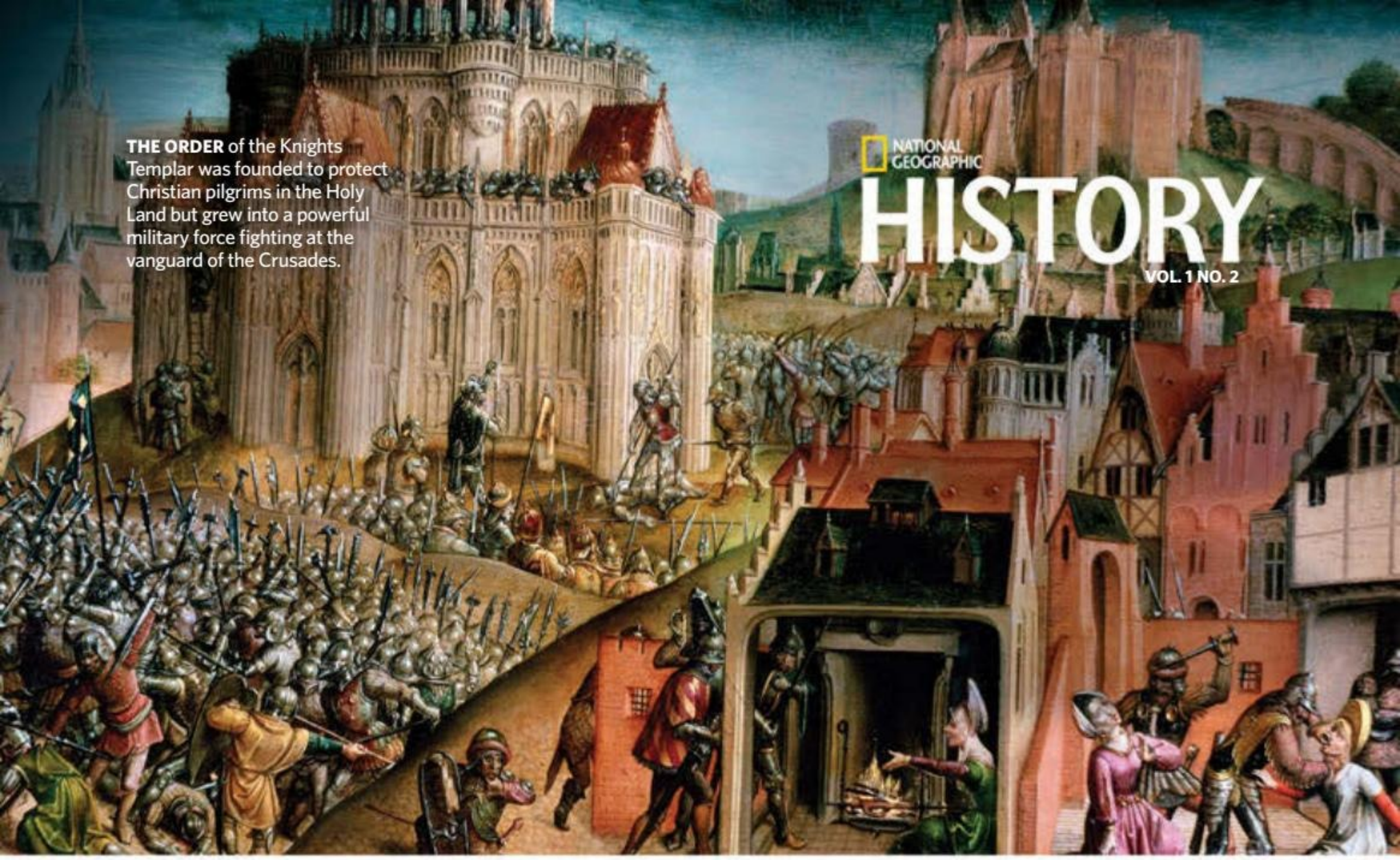


THE ORDER of the Knights Templar was founded to protect Christian pilgrims in the Holy Land but grew into a powerful military force fighting at the vanguard of the Crusades.

NATIONAL GEOGRAPHIC
HISTORY
VOL. 1 NO. 2

Features

18 The Key to Unlocking Ancient Egypt
The discovery of the Rosetta stone in 1799 began a politically charged race, as Britain and France fought to be first to read Egyptian writing.

30 Tikal, the Maya City Lost for a Millennium
The remarkable achievements of Maya civilization are reflected in the story—and haunting remains—of this magnificent jungle city.

44 Aristotle, the Father of Modern Thought
Despite the passing of 23 centuries, the Western world still owes much to the enduring ideas of Aristotle—the greatest Greek philosopher.

54 The Fact and Fiction of Rome's Foundation
The mighty Roman capital has a suitably epic myth to explain its founding. But is there truth to the legend?

64 Crusader Knights in the Holy Land
The Knights Templar rose from humble protectors of pilgrims to be the power behind Jerusalem's kings.

76 Jamestown, 1619
Hungry, diseased, and desperate, early colonists tried something new—representative government.

KING JAMES I OF ENGLAND, THE VIRGINIA COLONY'S NAMESAKE

Departments

4 NEWS

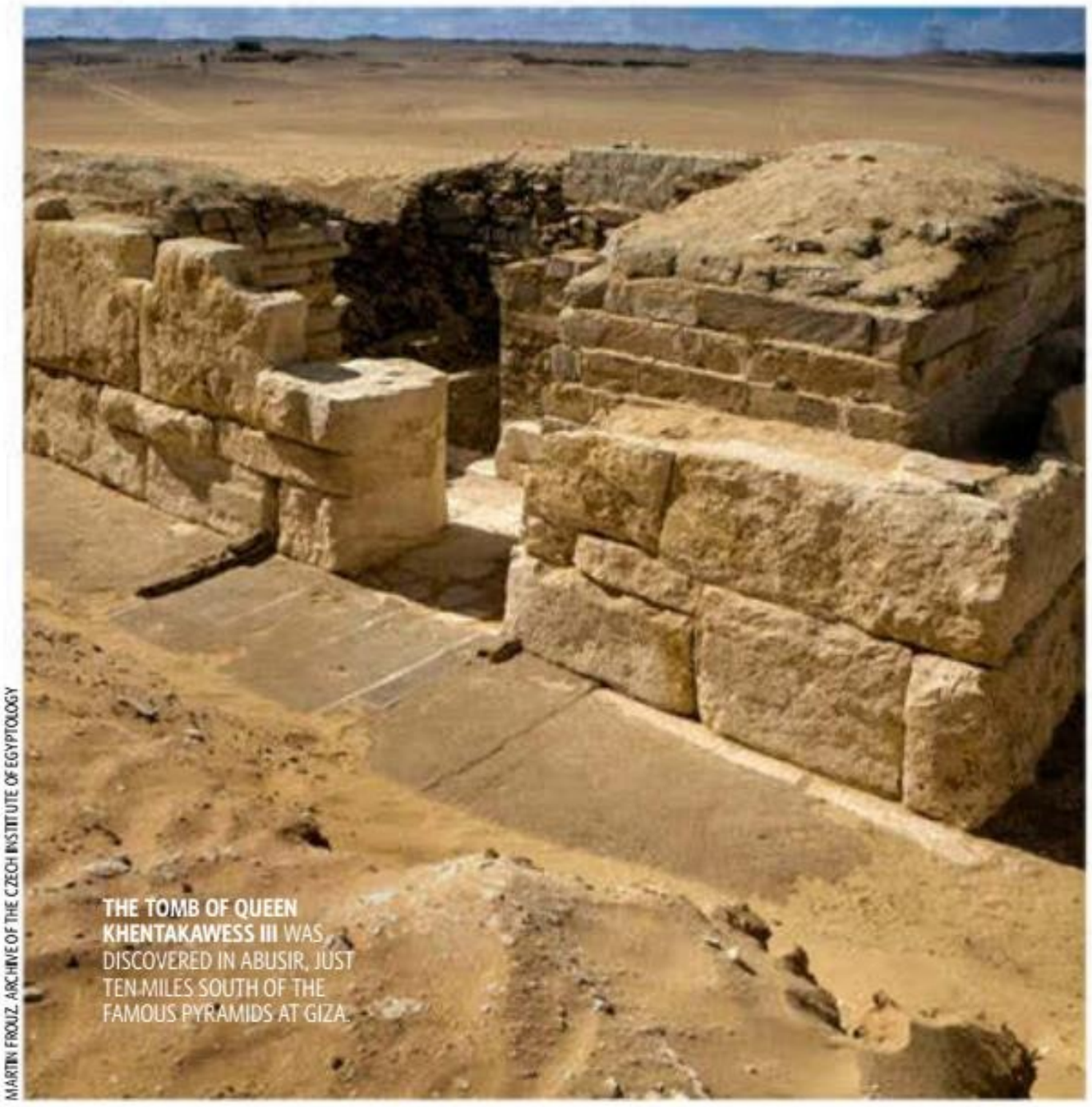
6 PROFILES
Barbarossa was the most feared corsair in
the 16th-century Mediterranean, bringing a political and religious fervor to his brutal piracy.

10 DAILY LIFE
Edward Jenner's unorthodox vision
saved countless lives and revolutionized medicine by creating the world's first vaccine.

14 MILESTONES
Napoleon's mistake in capturing Moscow
was believing it would make Russia surrender. Instead they burned their beloved city down.

90 DISCOVERIES
The Nasca Lines have long baffled experts,
inspiring many ideas about why these unusual desert drawings were made.

94 BOOKS

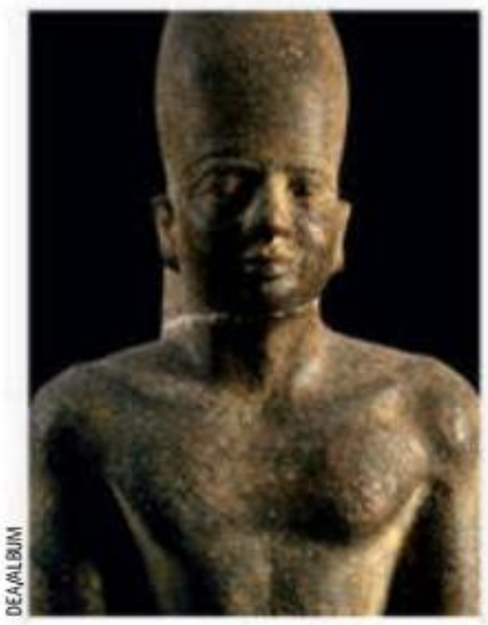


MARTIN FROUZ, ARCHIVE OF THE CZECH INSTITUTE OF EGYPTOLOGY

THE TOMB OF QUEEN KHENTAKAWESS III WAS DISCOVERED IN ABUSIR, JUST TEN MILES SOUTH OF THE FAMOUS PYRAMIDS AT GIZA.

MARTIN FROUZ, ARCHIVE OF THE CZECH INSTITUTE OF EGYPTOLOGY

THESE POTS AND PLATES are made with a kind of limestone known as Egyptian alabaster and were discovered inside the tomb. This material was widely used in the Old Kingdom of Egypt (circa 2686 B.C. to 2181 B.C.) to produce a range of luxury objects that are often found among the grave goods at royal burial sites.



DEA/ALBUM

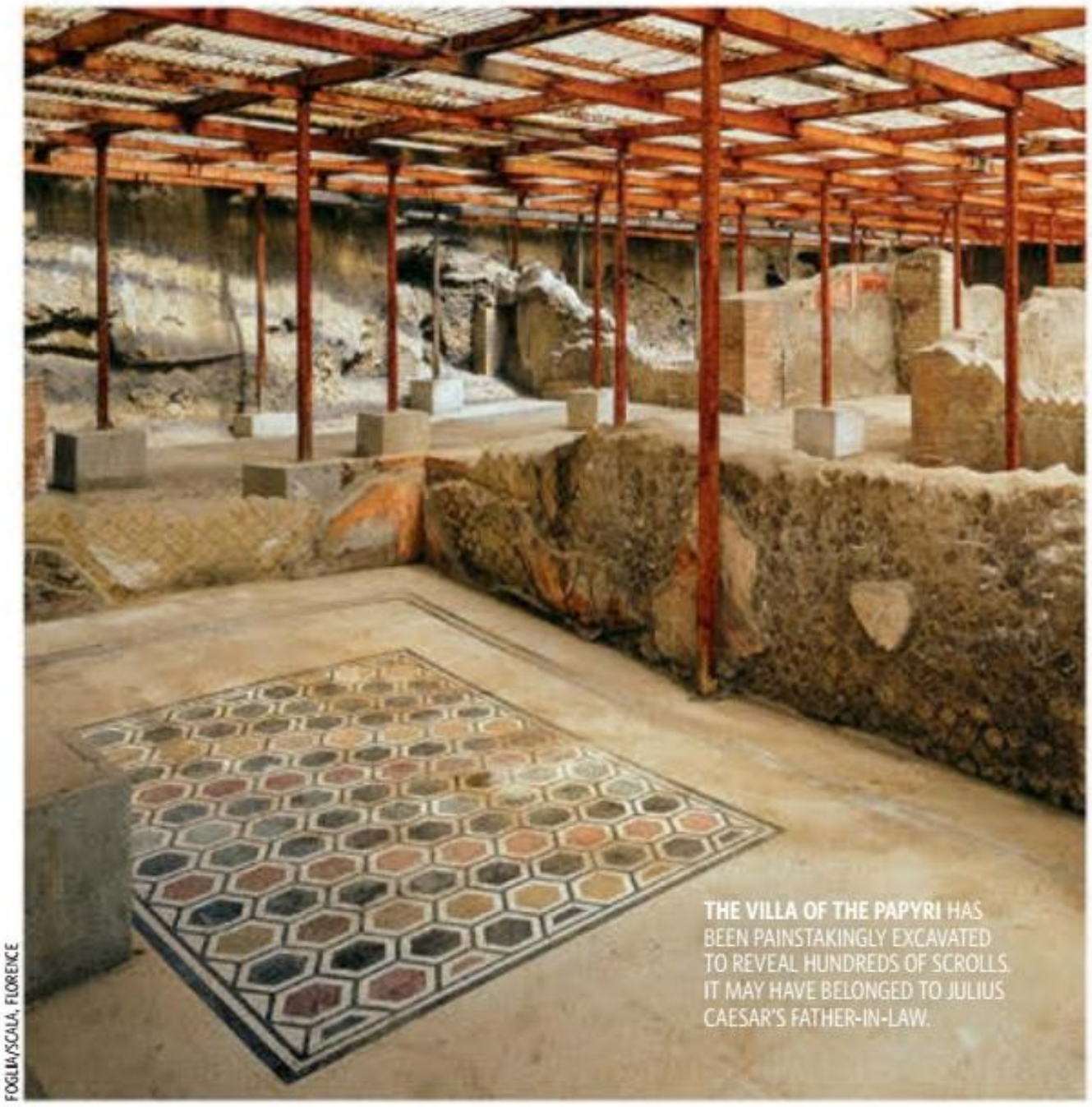
NEFEREFRE was a pharaoh of the 5th dynasty, the period in Egyptian history spanning from around 2465 B.C. to 2325 B.C. He probably only ruled a short time and may have been succeeded by his brother, Niuserre. Neferefre and Khentakawess's son, Menkauhor, became pharaoh after his uncle's death.

ANCIENT EGYPT

Tomb Reveals Previously Unknown Queen of Egypt

A team of Czech archaeologists has found the burial site of a queen named Khentakawess III, a previously unknown Egyptian monarch.

It is a very rare event to find a new royal tomb; it is even more unusual to find one belonging to a previously unknown monarch. Yet this is exactly the double success enjoyed by a team of archaeologists who have discovered the burial place of Khentakawess III, an Egyptian queen who lived around 4,500 years ago. The tomb was found in Abusir, an area southwest of Cairo and close to the mortuary complex of King Neferefre (who ruled Egypt from 2431 B.C. to 2420 B.C.). In fact, the archaeologists believe that Khentakawess was the wife of Neferefre. On the first level of her tomb is a mastaba—a flat-roofed funerary building typical of the Old Kingdom era—with the queen's burial chamber underneath. The mastaba features false doors to deter grave robbers, but despite these security measures the tomb was found to have been pillaged already. Even so, the archaeologists found a great many grave goods, including copper and limestone utensils, pots, and statuettes. The most important find, however, was the inscriptions on the walls. These were probably left by the builders and identify the tomb as that of Khentakawess III, who they refer to as wife and mother of the pharaoh. This confusing description is interpreted as meaning that Khentakawess was the wife of Neferefre and also the mother of his son, Menkauhor, who later also became pharaoh.



FOGLIA/SCALA, FLORENCE

THE VILLA OF THE PAPYRI HAS BEEN PAINSTAKINGLY EXCAVATED TO REVEAL HUNDREDS OF SCROLLS. IT MAY HAVE BELONGED TO JULIUS CAESAR'S FATHER-IN-LAW.

SCIENCE PHOTO LIBRARY/AGE FOTOSTOCK

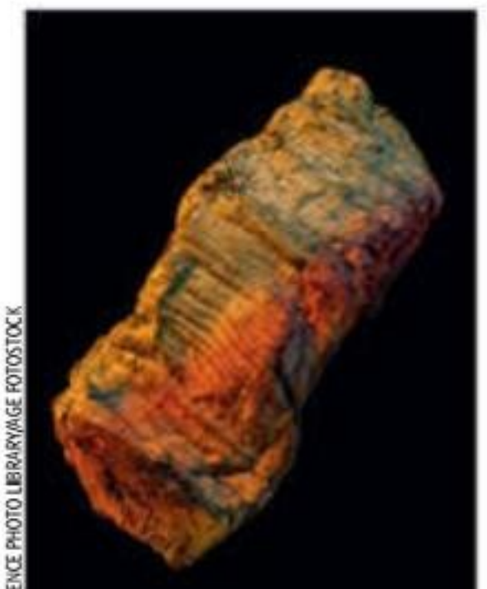
ONE OF THE METHODS USED to read the scripts from the Villa of the Papyri involved opening them by layers and breaking them carefully as shown above. Even so, the scrolls were badly damaged. Most of the texts were Epicurean philosophy, with other works by Philodemus of Gadara, a philosopher from the first century A.D.

ANCIENT ROME

The Writing Rising from the Ashes of Vesuvius

A new technology is allowing experts to read the words hidden in the charred remains of scrolls without opening and damaging them.

The papyri scrolls had been tightly rolled and stacked by the hundreds; then disaster struck. The eruption of Mount Vesuvius in A.D. 79 sent superheated pyroclastic waves surging through the houses of Herculaneum. In one, since dubbed the Villa of the Papyri, these hundreds of scrolls were burnt and fused into fragile rolls of ash. Since the library was uncovered some 250 years ago, many attempts have been made to read the scrolls. Some of the best preserved documents were unfurled, and from the fragments that survived this process it has been established that most of the scrolls contain the writings of Epicurean philosophers. But the unrolling was highly destructive; at best only about a third of the scrolls survived. Now, a new x-ray technique is allowing experts to finally read the writing on almost all of the burned scrolls without opening and destroying them. The procedure has been developed by researchers led by Vito Mocella of the Italian National Research Council. Their method is based on alterations in the phase of the x-rays: the waves move at different speeds as they pass through materials of different densities. They move slower where there used to be ink, allowing researchers to reconstruct the print that used to be there and finally read the text hidden for nearly 2,000 years.



SCIENCE PHOTO LIBRARY/AGE FOTOSTOCK

EPICUREAN philosophy follows the precepts of Epicurus, a Greek philosopher who lived from 341 B.C. to 270 B.C. He considered that men are mortal; that there is no god; and that humans should try to enjoy their time on Earth as much as possible. However, he did not promote quite the unrestrained hedonism commonly associated with his name.

Barbarossa, the Pirate Terror of Christendom

The 16th-century Mediterranean was ravaged by brutal pirates called corsairs. When the most feared of all, Barbarossa, allied with the Ottoman Empire, no Christian ship or city was safe.

Ally of a great sultan, rival of an emperor

1466

Hayreddin Barbarossa was born on the Greek island of Lesbos. In his youth he joined his brother on pirate raids in the Mediterranean.

1518

When his brother died, Barbarossa succeeded him as leader of the Algiers corsairs. He then adopted the nickname "Barbarossa."

1535

Charles V led a campaign to conquer Tunis and expel the corsairs. After fleeing to Algiers, Barbarossa sacked Minorca in revenge.

1543

Barbarossa, serving the Ottoman Emperor, led a fleet of more than 80 ships on raids along the coast of southern Italy.

1546

Barbarossa died peacefully in Istanbul. He was buried in a mausoleum near the Bosporus, celebrated as a great Muslim naval hero.

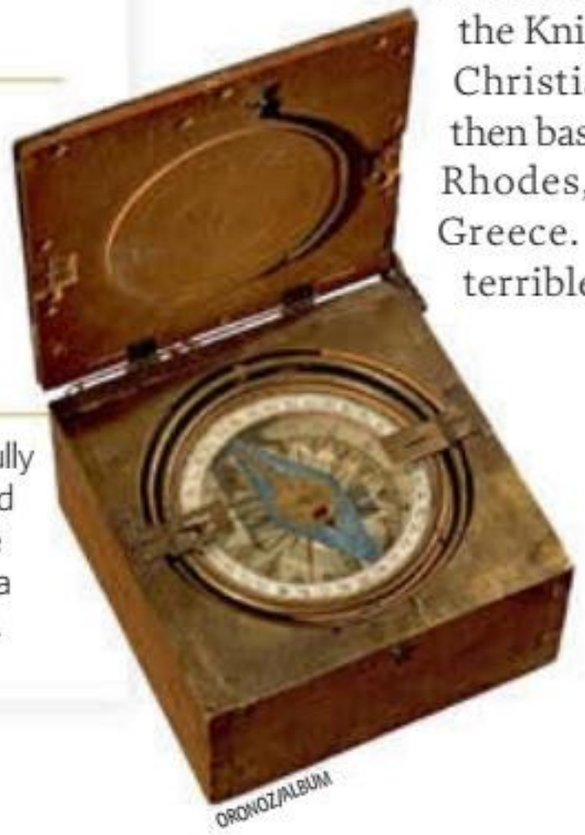
From his base in Algiers, North Africa, Hayreddin Barbarossa terrorized the western Mediterranean in the first half of the 16th century. He fearlessly hijacked ships and sacked ports, loading his pirate galleys with vast hoards of treasure and prisoners fated for slavery. Yet Barbarossa was much more than a soldier of fortune. He was a skilled warrior with a political instinct that led him to found a prosperous kingdom, allied with the Islamic empire of the Ottoman Turks, and actively defy one of Christian Europe's most powerful monarchs, the Spanish Emperor Charles V.

However, Barbarossa had modest beginnings. He was born on the Greek island of Lesbos, the son of a Christian renegade who had joined the Ottoman army. Oruç, Barbarossa's elder brother, was the first to take to the sea in search of adventure. It is unclear whether Oruç joined the powerful Ottoman navy or a merchant vessel, but in 1503 his ship was attacked and captured by the Knights Hospitaller, a Christian military order then based on the island of Rhodes, in present-day Greece. Oruç spent two terrible years as a galley slave on one of the knights' ships, but eventually he managed to escape. Reunited with his brother, they settled on the island of Djerba, off the coast of Tunisia. The place was a veritable den of corsairs, and they enthusiastically joined their ranks.

The brothers found they had a talent for piracy. Their attacks on Christian ships, especially Spanish ones, brought them huge amounts of loot and attracted the attention of the emir of Algiers, with whom they joined forces. Soon they commanded a fleet of about a dozen ships, which they used to launch daring attacks on Spanish strongholds in North Africa. It was while attacking one of these that Oruç lost an arm to a shot from an early musket called a harquebus.

Founding a Pirate Kingdom

Oruç had begun to dream of becoming more than a mere pirate: he wanted to rule his own North African kingdom. His chance came in 1516, when the emir of Algiers requested his help in expelling Spanish soldiers from the neighboring Peñón of Algiers, a small island fortress. Not a man to miss an opportunity, Oruç established his rule in the city of Algiers, disposing of the emir, who was apparently drowned while having his daily bath.



ORONOZ/ALBUM

A 16TH-CENTURY COMPASS AS BARBAROSSA MAY HAVE USED

Barbarossa won fame and fortune attacking ships off the North African coast near Tunis.

BARBAROSSA, A FAMILY NICKNAME

Hayreddin's brother Oruç was the first to be known as Barbarossa. His nickname was "Father Oruç," Baba Oruç, which the Italians took to mean *barba rossa*, or red beard, for Oruç did indeed have a red beard. Hayreddin inherited the nickname even though his hair was golden brown. López de Gómara, a Spanish chronicler, described Barbarossa: "He was of a cheerful disposition when he did not grow fat; he had very long eyelashes, and his sight became very poor. He lisped, could speak many languages, and was very cruel, exceedingly greedy, and very luxurious in both senses."

HAYREDDIN BARBAROSSA, AROUND 1530. PAINTED CIRCA 1580.

AKG/ALBUM

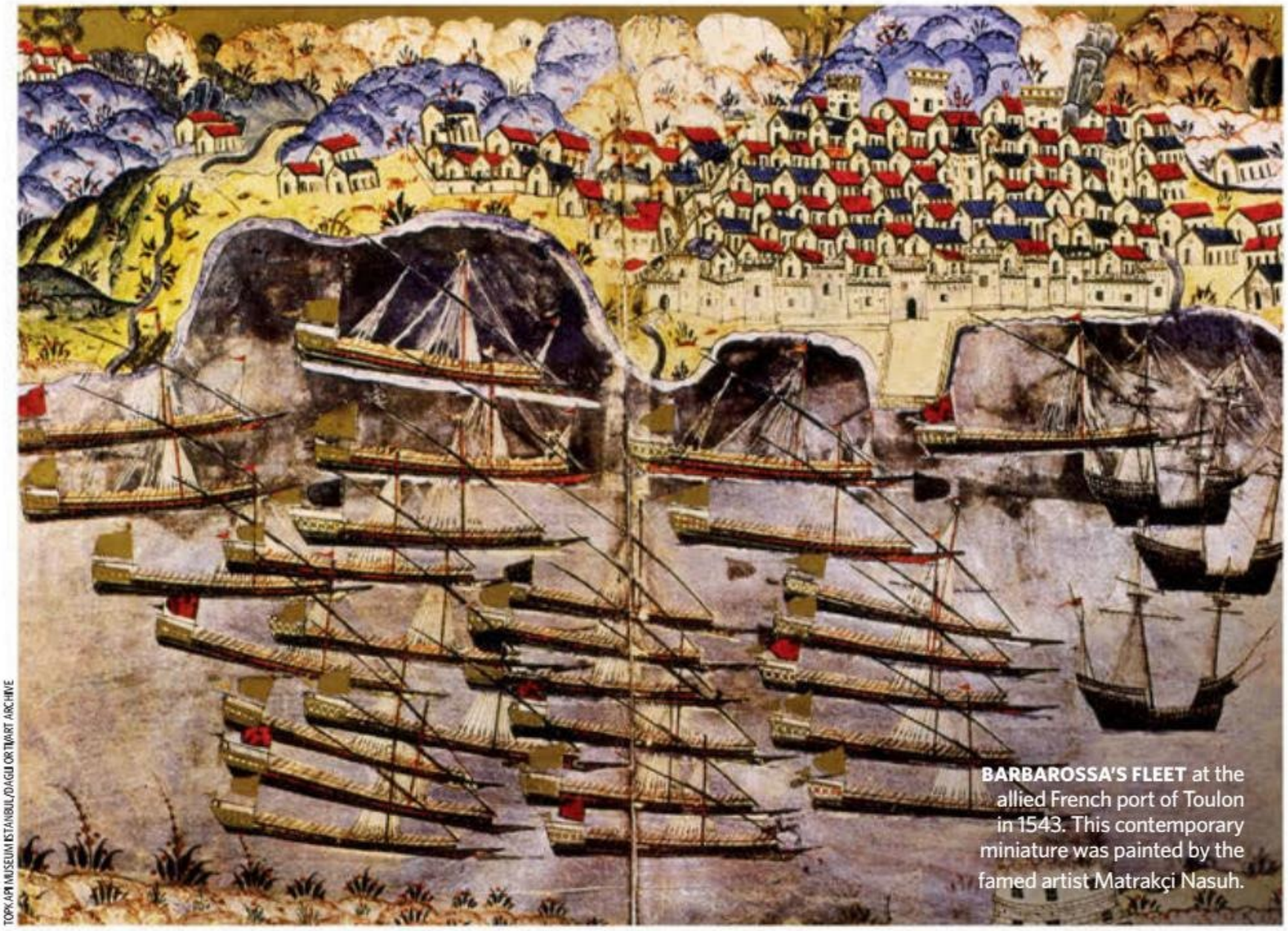
Oruç then had himself proclaimed sultan, to the joy of his brother and a growing army of supporters.

Oruç didn't stop there. He swiftly moved on to capture the Algerian cities of Ténès and Tlemcen, creating for himself a powerful North African kingdom that threatened and defied the authority of King Charles, just a short sail away in Spain. The Spanish reaction was not slow in coming. In 1518 a fleet set out from the Spanish-controlled port of Oran and soldiers stormed Tlemcen. Oruç fled, only to be found hiding in a goat pen, where a Spanish soldier first lanced him and then beheaded him—an ignominious end for the great corsair.

In Algiers Barbarossa took over as the leader of the corsairs. In the face of renewed Spanish pressure Barbarossa showed his political cunning and sought help from Süleyman the Magnificent, the Islamic sultan of the vast Ottoman Empire centered in Constantinople, present-day Istanbul, Turkey. Süleyman sent him 2,000 janissaries, the elite of the Ottoman army. In exchange, Algiers became a new Ottoman sanjak, or district. This allowed Barbarossa to carry on his piracy while consolidating his position by conquering additional strongholds. Nevertheless, the main threat remained right on his doorstep: the Spanish still occupied the Peñón of Algiers. In 1529 he bombarded the garrison into surrender before beating its commander to death.

Sultan versus Emperor

Barbarossa's fame spread throughout the Muslim world. Experienced corsairs, such as Sinan the Jew and Ali Caraman, came to Algiers, drawn by the prospects



TOPKAPI MUSEUM ISTANBUL/DAGLI ORTI/ART ARCHIVE

BARBAROSSA'S FLEET at the allied French port of Toulon in 1543. This contemporary miniature was painted by the famed artist Matrakçi Nasuh.

of making their fortunes. But Barbarossa fought for politics as well as piracy. When Charles V's great Genovese admiral Andrea Doria captured ports in Ottoman Greece, Süleyman summoned Barbarossa, who quickly answered the call. To impress the sultan, he loaded his ships with luxurious gifts: tigers, lions, camels, silk, cloth of gold, silver, and gold cups, as well as slaves, and 200 women for the harem in Istanbul. Süleyman was delighted and made Barbarossa admiral in chief of the Ottoman fleet.

Barbarossa now commanded over a hundred galleys and galliots, or half galleys, and started a strong naval campaign all around the Mediterranean. After reconquering the Greek ports, Barbarossa's fleet terrorized the Italian coast. Near Naples, Barbarossa and his men attempted to capture the beautiful Countess Giulia Gonzaga, who only narrowly escaped. Barbarossa even threatened Rome, where a dying Pope Clement VII was abandoned by his cardinals, who fled after plundering the papal treasury. However, these raids were just part of a bigger strategy, a diversion to distract from Barbarossa's true goal, Tunis. It worked; he took the port by surprise in 1534.

THE PIRATE AND THE EMPEROR

AS THE ADMIRAL IN CHIEF of the Ottoman fleet, Barbarossa was a constant threat to Charles V, whose empire included much of Europe's Mediterranean coastline. A Spanish chronicler wrote: "The Turks lost their fear of our nation, which they had hitherto considered invincible. Barbarossa is the cause of all this. He has taught them how to defeat us."

ERICH LESSING/MUSEUM

THIS ALABASTER BUST SHOWS THE EMPEROR CHARLES V.

Barbarossa's Revenge

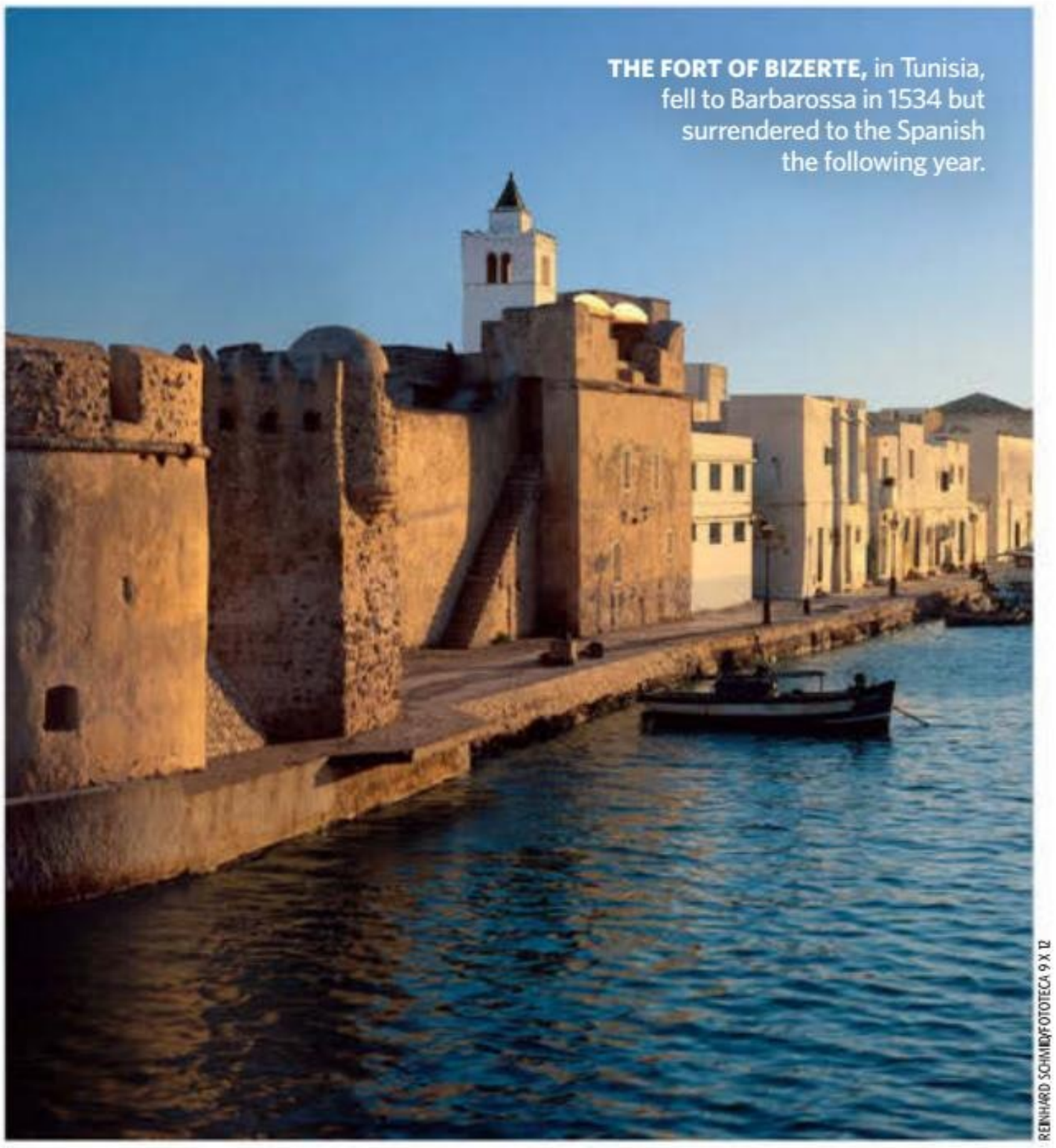
However, Barbarossa's success was brief. The following year Charles V sent a mighty military expedition that managed to recapture Tunis

A CAPTIVE FOR THE HAREM

IN 1534 Barbarossa launched an attack on Fondi, near Naples. His goal: to capture Giulia Gonzaga, a young widow of legendary beauty, and carry her off to Süleyman's harem. A traitor led 2,000 Turks to Giulia's home, from which, according to legend, she'd only just escaped, riding half naked through the night on horseback.

PHILIP MOULD/ART ARCHIVE

GIULIA GONZAGA, IN A PAINTING ATTRIBUTED TO SEBASTIANO DEL PIOMBO.



THE FORT OF BIZERTE, in Tunisia, fell to Barbarossa in 1534 but surrendered to the Spanish the following year.

REINHARD SCHMID/FOTOTECA 9 X 12

after a weeklong siege punctuated with bloody battles. Back in Algiers, Barbarossa was undaunted and out for revenge. He sailed to the western Mediterranean, and on approaching the Spanish island of Minorca his ships hoisted flags captured from Spain's fleet the year before. This ruse de guerre allowed him to enter the port unmolested. When the meager garrison realized the deception, they attempted a defense, but surrendered a few days later on the promise that lives and property would be spared. Barbarossa broke this promise and sacked the city anyway, taking hundreds of people to sell into slavery.

During the next few years Barbarossa, now commanding 150 ships, raided all along the Christian coastline of the Mediterranean. In 1538, cornered in the Ottoman port of Preveza, Greece, he defeated a stronger fleet commanded by Andrea Doria. In 1541 he also repelled the great expedition Charles V personally led against Algiers. Spanish chronicles mention that Barbarossa, by then in his 70s, fell in love with the daughter of the Spanish governor of the Italian coastal fortress of Reggio. True to form, Barbarossa carried her away.

A Muslim Hero

Barbarossa headed from Italy to the French ports of Marseille and Toulon. He was welcomed with every honor, as France and the Ottoman Empire had formed an alliance, united by their rivalry with Charles V. From France, some of Barbarossa's ships sailed along the Spanish coast sacking towns and cities.

In 1545 Barbarossa finally retired to Istanbul, where he spent the last year of his life, peacefully dictating his memoirs. He died on July 4, 1546, and was buried in Istanbul in the Barbaros Türbesi, the mausoleum of Barbarossa. The tomb was built by the celebrated Mimar Sinan, considered the Ottoman Michelangelo. It still stands in the modern district of Besiktas, on the European bank of the Bosporus. For many years no Turkish ship left Istanbul without making an honorary salute to the grave of the country's most feared sailor, whose epitaph reads: "[This is the tomb] of the conqueror of Algiers and of Tunis, the fervent Islam soldier of God, the Capudan Khair-ed-Deen [Barbarossa,] upon whom may the protection of God repose." ■

JUAN PABLO SÁNCHEZ

Learn more

BOOKS

The Sultan's Admiral: Barbarossa—Pirate and Empire-Builder
Ernie Bradford, Tauris Parke Paperbacks, 2008.

Vaccine, a Great Medical Victory

From the bubonic plague to influenza, history is rife with tragic tales of disease devastating defenseless populations in every part of the world. Then an 18th-century English doctor found a simple way to prevent smallpox and save millions of lives.

Infectious diseases are still headline news, but modern medicine has made it easy to forget the terrifying frequency and rapidity with which epidemics wiped out populations in the past. Poor medical understanding made it seem like disease could break out anywhere, at any time, and no one was safe. Death would sweep inexorably through communities with little explanation for an apparently random choice of victims.

Of all the many diseases that have scourged humankind, smallpox was one of the deadliest and most feared. For so much of our history so many have lived and died in its shadow that finding a way to prevent smallpox was a turning point for humanity. This scientific milestone was achieved toward the end of the 18th century by Edward Jenner, the English country doctor who created the smallpox vaccine. Remarkable though Jenner's discovery was, it did not occur in a vacuum. Jenner developed his vaccine on the foundations of a long struggle against smallpox and a particular technique commonly used in Turkey.

In 1716 Lord Montagu arrived in Istanbul to take up his post as the new British ambassador to Turkey. His wife, Lady Mary Wortley Montagu, had been struck down with smallpox just two years earlier. Somehow she had survived, but had been left disfigured by the disease. Lady Montagu mastered the local language and befriended Turkish women, through whom she made an extraordinary discovery: her new friends, defying logic, would deliberately infect themselves and their children with pus from smallpox sufferers. They then suffered a mild bout of the disease, after which they were left immune to its deadly effects.

Lady Montagu was deeply impressed. She was a highly independent woman who had already taught herself Greek, Latin, and French and who had married against the wishes of her parents. Without hesitation Lady Montagu inoculated her own children, declaring: "I am patriot enough to take pains to bring this useful invention into fashion in England."

Such methods were, in fact, already used in Europe, but Lady Montagu's great achievement was to publicize the technique—known as variolation—and to energetically defend it against the entrenched hostility of some doctors and even priests. Thanks to her campaign, a number of high-profile personalities inoculated themselves using the Turkish method, among them the kings of Denmark and Sweden and the Russian

WHITE IMAGES/SCALA, FIRENZE

A FRENCH DOCTOR vaccinates a boy following the procedure established by Edward Jenner in this 1820 oil painting by Constant Desbordes.

BEFORE JENNER

AT LEAST FIVE doctors had carried out research into vaccination before Jenner. During a smallpox epidemic in 1774, English farmer Benjamin Jesty used the cowpox virus to successfully inoculate his wife but did not make his experiment public.

SWISSPIX/AGE FOTOSTOCK

MEDICAL INSTRUMENTS BELONGING TO EDWARD JENNER

empress Catherine the Great. However, variolation had a serious shortcoming: between one and three percent of those inoculated fell ill and died. This mortality rate explains why the procedure never became a fully established practice. Lady Montagu, who had done so much to fight smallpox, died of cancer in 1762. It was the year that Edward Jenner, the man who would strike the decisive blow to eliminate smallpox, turned 13.

The Good Doctor

Edward Jenner was born the son of a country vicar, in the English village of Berkeley, Gloucestershire. When he was five his mother died in childbirth;

Smallpox, a disease defying borders

SMALLPOX was one of the deadliest diseases in Europe during the period before the French Revolution. At one point some 80 percent of the total population were struck down with the standard strain of smallpox; a third of those infected died.

Although hemorrhagic smallpox affected a much smaller proportion of the population, its mortality rate was nearly 100 percent. Since the inhabitants of Europe at the time were descendants of generations of people who had survived smallpox, the population there had a certain degree of immunity. However, when the dreaded pestilence was "exported" to areas that had never experienced it before, such as Siberia, the Pacific islands, or the Americas, entire communities were wiped out. With its capacity to spread, smallpox was one of the most devastating consequences of Europe's colonial expansion.

THE SYMPTOMS OF DOOM

SMALLPOX MANIFESTED itself some 12 days after infection. The victim would start to experience muscular pain, acute general discomfort, and fever as high as 104°F. On the third day a rash would appear in the mouth and on the tongue, spreading to the rest of the body. The pustules that would cause death by blood poisoning, secondary infection, or internal bleeding, appeared on the sixth day. On survivors, the scabs left behind by the pustules would peel off, often leaving the skin badly pocked and disfigured.

COWPOX PUSTULES ON THE ARM OF SARAH NELMES, A MILKMAID WHO CONSULTED JENNER

BRIDGEMAN/ACI

THIS IS THE HOUSE IN BERKELEY where Edward Jenner was born. Jenner lived and practiced medicine in this area of rural England for much of his life.

ALAMY/ACI

his father died two months later. Young Edward went to live with his brother. He was later apprenticed to a surgeon, studying and practicing medicine in a hospital. As a member of a local medical association, he published detailed papers on a wide range of medical conditions. He also wrote on a number of other topics that interested him, such as ornithology and aerostatic balloons. In 1789 his brilliant research on cuckoos won him a fellowship with Britain's most prestigious academic elite, the Royal Society.

Away from birds and balloons Jenner spent the 1790s methodically searching for a way to protect humanity from the disease that so blighted his country. He believed that something more effective than variolation was needed, and something with fewer risks for the patient. Earlier scientists had suggested that cowpox, a mild variant of smallpox found in cattle, might offer some kind of solution. As a doctor with a rural practice, Jenner was in an ideal position to research cowpox and its effects on people who worked with cattle. Jenner observed that milkmaids would often contract cowpox after coming into contact with the pustules on cows' udders. During smallpox outbreaks milkmaids' families would fall ill, but the milkmaids themselves, if they had had cowpox, were spared.

On May 14, 1796, Jenner took the bold step that would change medical science. He extracted pus from the sores of a milkmaid and used it to inoculate a little boy, the son of his gardener. A week later the boy fell ill. For a tense couple of days Jenner monitored his progress, and then the boy recovered. Six weeks later, Jenner infected the boy with the smallpox virus—he showed no noticeable effects at all. Jenner then repeated the experiment with 22 more people—a course of action that today would be considered gross negligence. Again, none of the inoculated subjects died or showed signs of serious illness. It was the proof Jenner needed that his method, already termed "vaccination," was effective.

A Great Controversy

Although Jenner's success was greeted with great enthusiasm, it also drew bitter opposition on scientific as well as ideological grounds. Reactionary bishops joined with enlightened philosophers, including Immanuel Kant, in opposing vaccination. The situation was complicated by poorly trained practitioners carrying out Jenner's procedure without properly understanding it, sometimes spreading the disease rather than containing it. One of the most important precautions stipulated by Jenner was that samples should only be taken from cowpox

Jubilant support and poisonous opposition

JENNER'S METHOD sparked a vigorous debate. Though some immediately hailed the considerable advantages vaccination would offer to humanity, others sounded the alarm on its risks, both real and imagined. The two caricatures below give a good idea of the starkly different responses elicited by Jenner's seminal discovery.

BRIDGEMAN/ACI

Salvation for humankind

In the background victims of smallpox beg for help. Jenner himself appears on the right, crowned by an angel as "preserver of the human race." Wielding the scalpel used to carry out vaccinations, Jenner beats off the traditional doctors, who flee bearing scalpels dripping with gore. One of the scalpels has "the curse of human kind" engraved on it, and at the doctors' feet lie the bodies of children killed by their refusal to act.

BRIDGEMAN/ACI

A devilish discovery

This 1802 caricature depicts Edward Jenner feeding small children into the fierce-looking jaws of a cow-like monster covered in pustules. Killed by Jenner's vaccination, dozens of dead infants are hurled by a demon into a wagon. In the background five doctors opposed to vaccination descend from the Temple of Truth to join forces against what they considered a murderous practice.

blisters seven days after they first appeared, ensuring that the illness was less virulent. Although Jenner never knew it, his emphasis on a weakened strain of cowpox would later prove the key to tackling other diseases. When a relatively benign animal equivalent of a disease did not exist, it was discovered that a vaccine could be developed using weaker, related microorganisms. Jenner himself was unable to apply such thinking, as pathogens and their workings were not understood in his lifetime.

His methods, however, worked extremely well and were gradually implemented throughout Europe. In 1803 the Royal Jennerian Society was founded in Britain, offering vaccination free of charge in a drive to tackle a disease killing 80,000 Britons every year. In 1805 Napoleon Bonaparte ordered the vaccination of his entire army. The Spanish government launched a three-year-long philanthropic expedition to bring vaccination to the Spanish Empire and beyond, including the Americas, the Philippines, Macao, and China. Jenner wrote of this remarkable expedition, "I don't imagine the annals of history furnish an example of philanthropy so noble, so extensive as this."

Jenner's Legacy

Edward Jenner found himself bestowed with a wealth of titles and honors. The British Parliament awarded him £10,000 —a colossal sum for the time—later supplemented with an additional £20,000. Yet, despite all the glory heaped upon him, Jenner remained a man of relatively modest habits. He returned to the village of Berkeley, where he continued to practice as a doctor. It was here that his wife and one of his children succumbed to another great scourge of the time, tuberculosis. On January 25, 1823, Jenner suffered a stroke while asleep and was found dead the next morning. He was 73 years old.

In 1840 the British government formally banned variolation and passed laws to vaccinate the entire population for free. Smallpox was being beaten, but one mystery remained—its cause. This was resolved when Louis Pasteur and Robert Koch discovered germs, and in doing so made it possible to develop vaccines against other diseases. The last known case of smallpox was in Somalia in 1977. The long battle against death and disfigurement was over, thanks largely to the insight of an English country doctor.

JUAN JOSÉ SÁNCHEZ ARRESEIGOR

Learn more

BOOKS
Vaccination Against Smallpox
Edward Jenner, Prometheus Books, 1996.

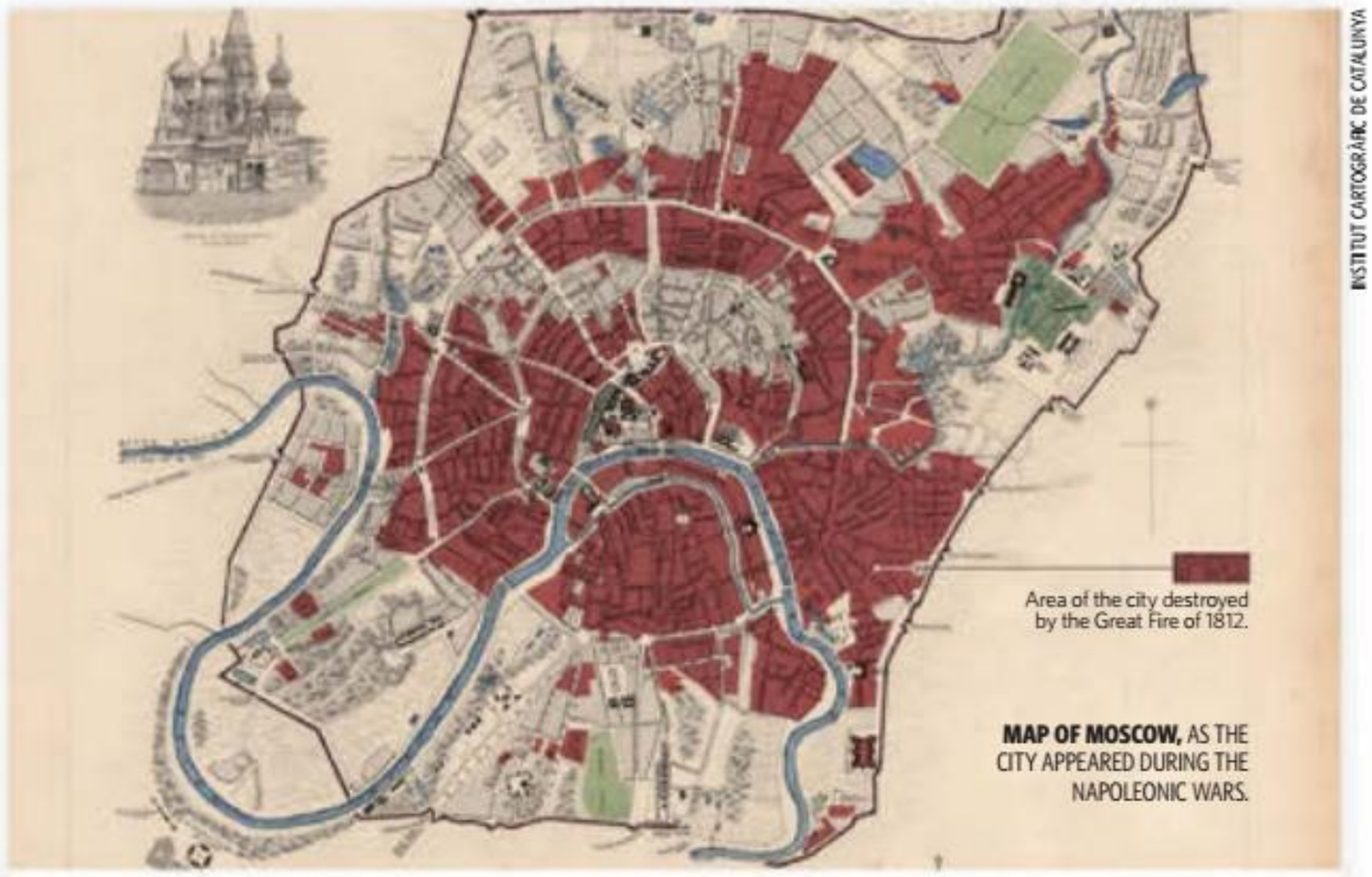
NAPOLEON WATCHES as the flames engulf the city of Moscow on September 15, 1812. This oil painting by A. F. Smirnov was completed in 1813.

Moscow, 1812: Fighting the French with Fire

The Grande Armée of France had dominated the battlefields of Europe for over a decade when Napoleon Bonaparte embarked upon his most ambitious campaign yet. Leading over 450,000 soldiers, he invaded the vast expanse of the Russian Empire. His goal: to capture Moscow—reasoning that when the city surrendered so would the country. He was utterly mistaken.

It was September 14, 1812, when the emperor Napoleon Bonaparte caught his first glimpse of the sparkling domes that topped the Orthodox churches of Moscow. "There, at last," he said, "is that famous city!" It had been three months since the French had launched their invasion of Russia, and just a week before Napoleon's mighty army had narrowly defeated the Russians at the Battle of Borodino. Though French losses had been heavy, the victory had opened up the road to Moscow, and the emperor had every reason to believe that capturing what was considered Russia's spiritual center —St. Petersburg was its political capital— would bring his epic campaign to a triumphant conclusion. "Peace waits for me at the gates of Moscow," he optimistically declared. The first French troops to enter the city marveled at what they saw. "Even those French, so proud of their Paris, were surprised by the sheer size of the Russian capital, of the magnificence of its buildings, of its elegant lifestyle, and of the riches we found there," wrote Napoleon's chief doctor. In its enormous expanse of over 8,400 acres, Moscow boasted some 464 factories and workshops, 329 churches, as well as numerous palaces and many imposing public buildings. As the French soldiers marched along streets lined with such architectural

AKG/ALBUM



INSTITUT CARTOGRÀFIC DE CATALUNYA

MAP OF MOSCOW, AS THE CITY APPEARED DURING THE NAPOLEONIC WARS.

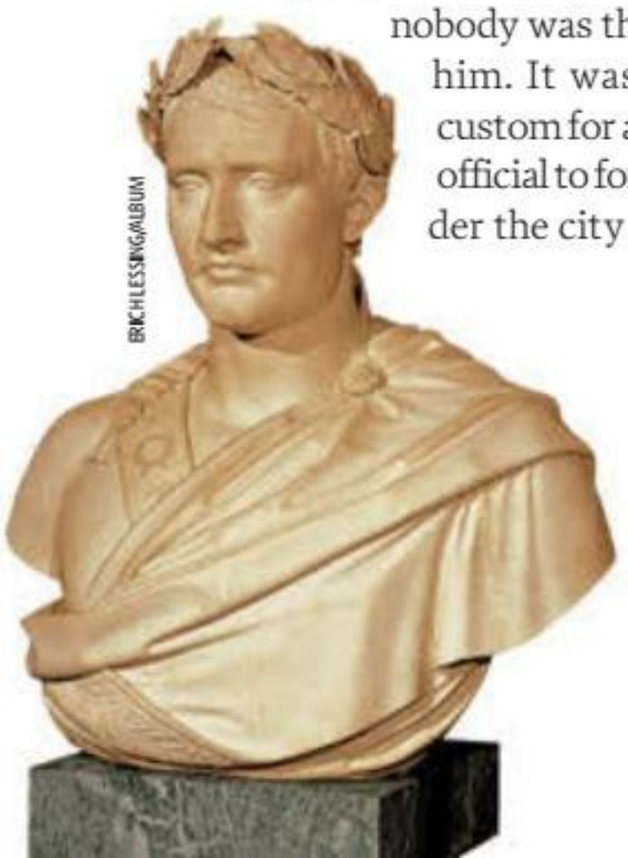
AN EXAGGERATED DISASTER?

THE ACTUAL EXTENT of the Great Moscow Fire is much debated. Russian maps seem to overstate how much of the city was actually affected, marking as destroyed many buildings and even entire blocks that we actually know to have been spared. Some historians also question whether the fire was necessary to achieve its strategic goal. They argue that the evacuation of the city had already greatly hampered the French army's ability to supply itself.

wonders, one thing came as a particular surprise: the city was almost deserted. Its entire population of 270,000 people seemed to have vanished. "Not a Muscovite was to be seen," wrote the Comte de Ségur, one of Napoleon's generals. "Not the least smoke rose from a single chimney; not the slightest noise issued from this immense and populous city."

Entering Moscow that afternoon, Napoleon himself was troubled that nobody was there to receive him. It was an accepted custom for a high-ranking official to formally surrender the city and negotiate terms that would guarantee the safety of its citizens. Despite the absence of this diplomatic courtesy, Napoleon issued orders to prevent looting and the destruction of property. The next day he installed himself in the Kremlin: "At last, then, I am in Moscow," Napoleon enthused, "in the ancient palace of the Tsars." The day passed all too quietly. That night his men woke up in alarm. The Comte de Ségur wrote: "They were awakened by an extraordinary light. They looked and beheld palaces filled with flames, which at first merely illuminated, but presently consumed these elegant and noble structures." There was little anyone could do but watch as the sea of flames engulfed the city. At four in the morning a nervous entourage woke Napoleon. The Kremlin held stores of gunpowder that could blow the building sky-high, so the emperor withdrew to a palace on the outskirts of the city. By then, the fiery spectacle was as terrifying as it was majestic: the heat could be felt from miles away and you could read a newspaper by its light.

There has been much speculation about how the fire started. Patriotic Russian historians pointed the finger firmly at the French. In Leo Tolstoy's *War and Peace* the fire is considered to be an accident. In fact one man alone was actually responsible for the blaze: Count Fyodor Rostopchin, the military governor of Moscow.



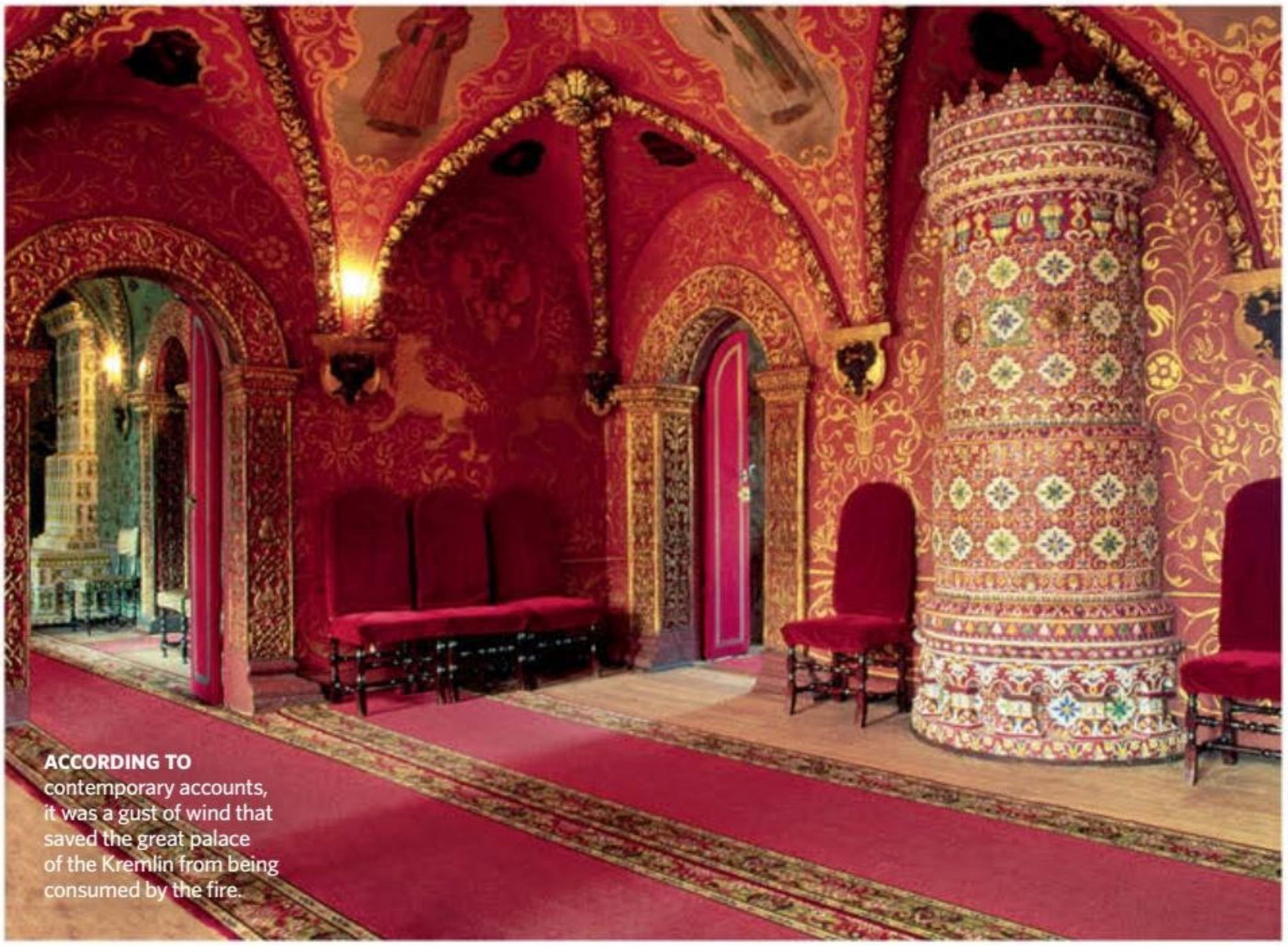
BRIDGEMAN/ALBUM

"At last, then, I am in Moscow, in the ancient palace of the Tsars, in the Kremlin!"

NAPOLEON BONAPARTE, AFTER A MODEL BY ANTOINE-DENIS CHAUDET, 1811

A Tough Decision

Rostopchin, like many Russians, felt betrayed that after the defeat at Borodino there was no attempt at a spirited defense of Moscow. Instead, Russia's



ACCORDING TO contemporary accounts, it was a gust of wind that saved the great palace of the Kremlin from being consumed by the fire.

DIEGO LEZAMA OREZZOLI/CORBIS/CORDON PRESS

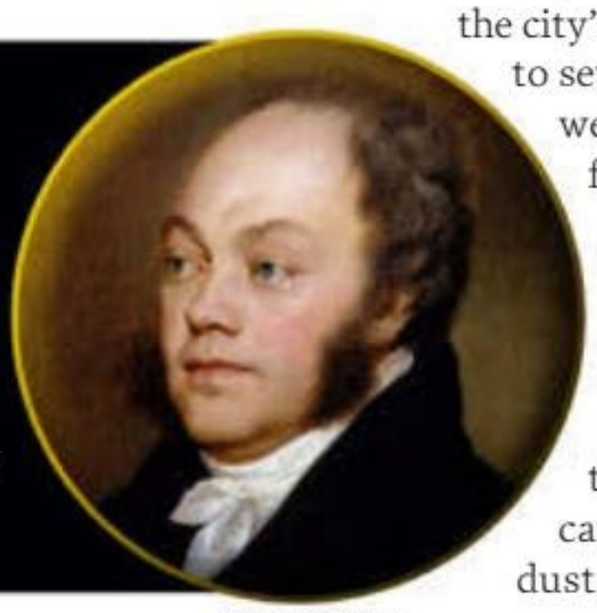
commanding general, Mikhail Kutuzov, withdrew his army to the east, hoping that the occupation of Moscow would give him time to regroup. "Napoleon is like a torrent which we are still too weak to stem," Kutuzov explained. "Moscow is the sponge which will suck him in."

Unaware of Kutuzov's military calculations, Governor Rostopchin, an impassioned nationalist, decided that he would rather see his beloved Moscow burned to the ground than occupied by the enemy. In some ways this was in keeping with Russian strategy, which had from the start been based on a scorched-earth policy of destroying food and resources in the path of the advancing enemy. This denied the French the opportunity to live off the land, forcing them to bring supplies hundreds of miles across hostile territory and causing terrible shortages. Even so, putting the great city of Moscow to the torch far exceeded any previous act of destruction.

Meanwhile, Muscovites were convinced that the French would put them all to the sword, and had abandoned their city amid fervent religious processions. Many sought refuge in the neighboring forests. On the night of September 13, Rostopchin met the superintendent of the city's police and gave him the order to set the city ablaze. Key buildings were specially primed to help the fire spread. The job was entrusted to convicts, who would be given freedom in exchange for arson. "Hideous-looking men, covered with rags . . . wandering among these flames," wrote the Comte de Ségur. "They were caught, armed with torches, industriously striving to spread the

THE DEFEAT OF NAPOLEON

THE SAME DAY that Napoleon entered Moscow, the city's governor wrote to his wife: "My dear companion . . . By the time you receive this letter, Moscow will have been reduced to ashes . . . If we do not burn the city, we will at least ransack it. Napoleon would do it later anyway, and this is a triumph that I am not willing to grant him."



COUNT ROSTOPCHIN, IN AN 1809 PORTRAIT

CULTURE-IMAGES/ALBUM

Sacking a City in Flames

MOSCOW'S GREAT FIRE triggered scenes of chaos, as mobs started an orgy of looting. According to one witness, "soldiers, merchants, prisoners, all were running through the streets, entering the empty palaces to make off with everything that satisfied their greed: cloths of gold and silk, skins, fine wines . . . "

AKG/ALBUM

① *Peasants*
Some French soldiers forced the Russian peasants to carry their loot, driving them forward with whips.

② *Cruelty*
Despite the city's evacuation, some Russians remained. Witnesses reported assaults and rapes.

③ *Plunder*
The looters piled up their plunder in the streets: clothes, jewels, money, textiles, silverware, and art.

④ *Drink*
"Lacking food, some soldiers got so drunk that they collapsed on the ground, rigid and senseless."

⑤ *Napoleon*
The emperor allowed some looting to find food, but amid the frenzy he issued orders for it to stop.

flames." The conflagration soon surpassed anything its perpetrators had intended. The fire spread even farther due to criminal activity and the carelessness of the French troops. The summer had been dry and hot; the wood-frame houses of Moscow were all just fuel for the furnace.

Stealing or Saving?

Those Muscovites who had not fled were forced to take refuge in squares and other public spaces to avoid the flames. But many of those who fled outside found themselves facing a foe as deadly as the fire: looters. The city had succumbed to a terrifying riot of looting that was not confined to criminals; even French generals took part in the ransacking of palaces and mansions. Many reasoned that taking art and other valuables could not count as theft if they would otherwise be destroyed by the fire. Some Muscovites were further humiliated by being forced to carry the plunder of those who had robbed them. Even *cantinières,* the French women accompanying the army, went on the rampage, in some cases tearing open the clothes of the city's women to search for hidden valuables.

The fire raged for three days; perhaps as much as two-thirds of Moscow's buildings were destroyed. Some 6,400 homes, hundreds of shops and warehouses, 122 churches, the university, the Buturlin library, and the Petrovsky and Arbatsky Theaters, were all reduced to ashes. Some treasures were salvaged—or stolen—but many priceless works of art were lost forever.

From the blackened and smoldering ruins of Moscow, 12,000 bodies were recovered. These included some 2,000 wounded Russian soldiers who had been unable to run, walk, or crawl to safety. The real death toll may well have been much higher. After the war and the return of the refugees, the city's population was found to have fallen from 270,000 to only 215,000.

"A terrible spectacle!" Napoleon said, contemplating the grim aftermath. "It is their own work!" For a month, Napoleon tried to negotiate a Russian surrender. Only when the first snows fell in October did he give the order to return to France. Caught in the dreaded Russian winter, harassed by the tsar's troops, the westbound journey was a living hell for the Grande Armée, and marked the beginning of the end for Napoleon and his empire. ■

JUAN JOSÉ SÁNCHEZ ARRESEIGOR

Learn more

BOOKS
Moscow 1812: Napoleon's Fatal March
Adam Zamoyski, Harper Perennial, 2005.

THE ROSETTA STONE

For 1,500 years the world lost the art of understanding ancient Egypt's hieroglyphic script. Then, in 1799, a French soldier stumbled upon an artifact that sparked a race to read the forgotten words of the pharaohs.

NATIONAL ARCHAEOLOGICAL MUSEUM, FLORENCE/DAGLI ORTI/ART ARCHIVE

BRITISH MUSEUM/RMN-GRAND PALAIS

THE ROSETTA STONE

This celebratory stela was carved at the beginning of the second century B.C. during the reign of the Hellenistic Greek Pharaoh Ptolemy V Epiphanes. Jean-François Champollion (opposite, seated) finally cracked the code in 1822.

LAUREN LECAT/AKG/ALBUM

EGYPTIAN RUINS
Drawing by Vivant Denon during the French archaeological campaign in Egypt, 1798 to 1801. Artists and engineers from France were among the first to systematically measure and draw Egypt's monuments.

In the southern wing of London's British Museum, listed under the uninspiring inventory code EA24, there is an object on display that in the early 19th century revolutionized our understanding of ancient Egypt and breathed new life into its long-dead pharaohs. The importance of EA24, the Rosetta stone, lies not in the subject of its densely worded text—a royal announcement known as the Decree of Memphis—but in the text itself. Its carved inscriptions contained something that for centuries scholars had searched for in vain: a way to read ancient Egyptian hieroglyphs.

But the discovery, study, and translation of the Rosetta stone was much more than a matter of academic interest: It is the story of a clash of two powerful empires, Great Britain and revolutionary France, vying for control of the ancient land of the pharaohs. Against a backdrop of bloody battles in dusty deserts, the great discovery in Rosetta sparked a thrilling scholarly race. Which nation would claim the glory of being the first to decipher the hieroglyphs that had eluded understanding for nearly 2,000 years? The story of the Rosetta stone reveals as much about the turbulent times of the early 19th century as it does about ancient Egypt.

The French Revolution of 1789 inspired the wrath of Europe's monarchies, but by 1798 the only country that remained at war with France was Great Britain. These two bitter adversaries remained locked in a monumental struggle that, while primarily taking place on battlefields in Europe, was also being fought in more distant lands. Unable to invade across the English Channel, the French government decided to carry its battle with the British farther afield, attacking its imperial interests in the eastern Mediterranean. A major French military expedition was launched from the southern French port of Toulon. It conquered the British island of Malta; then Egypt fell. Although Egypt had been part of the fading Ottoman Empire, its conquest stung British commercial interests, as it gave the French control of the vital trade routes that passed through the region.

Leading the French expedition was the man who had, in effect, been the brains behind the whole project: Gen. Napoleon Bonaparte. It was not his finest hour. Having vanquished the Egyptian army with relative ease at the Battle of the Pyramids, the French fleet was spectacularly destroyed by the British at the Battle of the Nile. Napoleon was forced to abandon his rapidly deteriorating army and flee back to France where, in an astonishing act of political spin, he claimed to have been victorious and was soon appointed as consul and then emperor. Meanwhile, the

RMN-GRAND PALAIS

THIS BUST OF CHAMPOLLION WAS SCULPTED IN 1863.

EUROPE DISCOVERS ANCIENT EGYPT

1798
Napoleon lands with his troops in Alexandria to start the conquest of Egypt. The expedition includes scientists and historians.

1799
In the port of Rosetta a French officer discovers a stone with inscriptions in three types of writing: hieroglyphs, demotic Egyptian, and Greek.

ABU SIMBEL

This great temple in southern Egypt was excavated by the Italian archaeologist G. B. Belzoni in 1817, in the great wave of archaeological expeditions that followed Napoleon's campaign in Egypt.

1801
The victorious British Army forces French scholars to hand over the Rosetta stone, which is transferred to the British Museum in London.

1802
Johan David Åkerblad publishes his *Letter to Monsieur de Sacy*, the first study of the stone, in which he deciphers 29 symbols.

1814
Thomas Young, a British doctor, physicist, biologist, and linguist, successfully translates the stone's demotic text.

1822
By studying the stone alongside other texts, Jean-François Champollion unravels the workings of the hieroglyphic system.

FRANS LEMMENS/GETTY IMAGES

BRIDGEMAN/ACI

VIEW OF CAIRO IN THE 1800S

This engraving is based on a drawing by Henry Salt, a keen Egyptologist, and British consul in Egypt from 1816 to 1827. Having defeated the French Army, Britain maintained a military presence in Egypt well into the 20th century.

surviving French forces in Egypt were steadily diminished by war and disease until they were finally defeated by the British in July 1801.

But amid the chaos of these military disasters, a group of some 170 French mathematicians, civil engineers, scientists, artists, and naturalists were doing some remarkable work. What were all these scholars doing on a military expedition? In addition to conquest, the French sought to chart Egypt's past and gather information on its geography, natural history, and customs. They hoped that this knowledge would support their military dominance of Egypt and help to bring prosperity to the country. True to the inquiring spirit of the Age of Enlightenment, which sought reasoned explanations for everything, the French scholars would effectively rediscover a land that at the time was known only through references in classical literature or the tales of the few intrepid travelers who had begun to venture beyond Cairo.

The scholars wasted no time on arrival. They quickly founded the Institut d'Égypte in Cairo, from which they would launch expeditions to investigate everything from astronomy to archaeology. Yet for all their careful planning and systematic, scientific approaches, the object that would advance and stimulate the world's understanding of ancient Egypt most was discovered through pure chance.

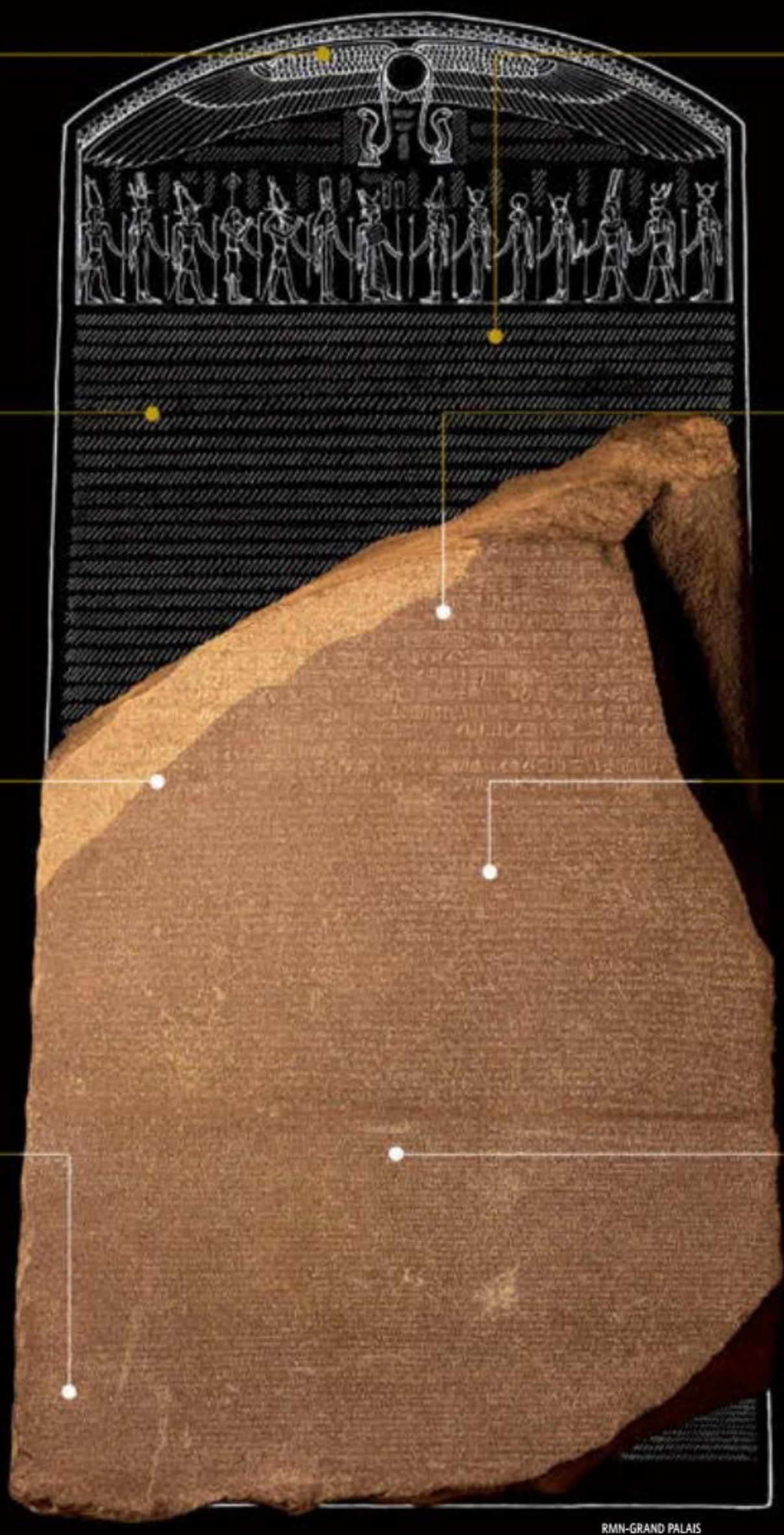
The Great Discovery

The Egyptian settlement of Rashid was a commercial port in the Nile Delta; it was known to Europeans as Rosetta. Fearing a possible British attack there, a French military detachment began rebuilding an old Egyptian fortress known to them as Fort Saint Julien. On June 19, 1799, the soldiers discovered a block of granite 45 inches long and 28.5 inches wide, its polished surface inscribed with three different types of writing. On learning the news, the Institut d'Égypte issued a clear order: the strange stone should be sent to Cairo immediately. When they received the stone, the scholars set about studying it straightaway. The text inscribed on the stone was divided into three parts: an upper section of 14 lines was made up of hieroglyphs; in the center were 32 lines of cursive script representing the demotic or simplified form of ancient Egyptian; the lower part consisted of 54 lines in Greek, a language

RECONSTRUCTING THE ROSETTA STONE

THE ROSETTA STONE is, in fact, a fragment of a larger stela from the time of Ptolemy V Epiphanes (portrayed here performing a sacrificial offering). The stela was a stone-inscribed copy of a decree issued from the temple of Ptah, in Memphis, with which the priests marked the anniversary of the pharaoh's accession to the throne. Shown below is a reconstruction of the Rosetta stone as it may have looked, based on studies of similar bilingual and trilingual decrees, such as the Decree of Canopus, 238 B.C.

K. GARRETT/NATIONAL GEOGRAPHIC CREATIVE/CORBIS;©CORDON PRESS



RMN-GRAND PALAIS

THE KING AND THE GODS
The upper part of the stela is curved and frames a sun-shaped disk around which loops a double uraeus, representing the cobras that protected Egyptian royalty. Below this are various gods and the pharaoh himself, who is delivering the decree.

THE DECREE
The legal text inscribed on the stela gives an account of the privileges (especially economic ones) the temple had received from the king, along with the rites that the priests had performed as an expression of gratitude to their sovereign.

ROYAL PROPAGANDA
For the Ptolemys, decrees like this were propaganda tools. In this case, the king is recognizing the privileges granted to the temple by the pharaohs in ancient times, and in return, the temple is recognizing his legitimate right to rule as sovereign.

VITAL STATISTICS
The surviving piece of the stela is 45 inches long and 28.5 inches wide; it weighs 1,676 pounds. In 1999 the stone was cleaned, leaving the bottom-left corner to show the darkened wax and white infill of previous restorations.

DIVINE WORDS
Ancient Egyptians took names very seriously: They believed the destruction of a name meant the erasure of the person's existence. Carved as hieroglyphs, the "divine words" of objects and names were believed to be preserved for all eternity.

THE CARTOUCHES
From the 4th dynasty of ancient Egypt, the names of the pharaohs were enclosed in oval-shaped capsules called cartouches. With its solar symbolism, the cartouches protected the name of the monarch and, by extension, his kingdom.

THE DEMOTIC
The Egyptian language underwent significant changes during its more than 4,000 years of use. The Saite Period, from around 663 B.C., saw the spread of the demotic writing system. This was the second of the three texts used on the stone.

GREEK
Decrees issued by the Ptolemys were not only distributed in Egyptian —both the demotic of the common people and the hieroglyphs of the priesthood—but also in the language of the Ptolemy kings themselves: Greek.

"EGYPT-MANIA" SWEEPS EUROPE AND THE WORLD

THE FRENCH EXPEDITION to Egypt made a deep and immediate impression on European culture. In 1802 one of its scholars, Vivant Denon, published a book called *Travels in Lower and Upper Egypt*, which sent ripples of fascination across Europe and the U.S. Between 1809 and 1828 the scholars' research was published as a monumental 20-volume work: *The Description of Egypt*. The new interest in Egypt was rapidly reflected in European art. In Britain the furniture made by Thomas Hope and the ceramics of Wedgwood took on an Egyptian aesthetic. In architecture, Egyptian pyramids, sphinxes, and lotus-shaped columns became popular features, and Egypt even seeped into the fiction of writers, including Edgar Allan Poe.

EGYPTIAN-STYLE CHINA BELONGING TO NAPOLEON, LOUVRE MUSEUM, PARIS, 1810

NOT SO ROSETTA

Even though the stone would forever bear the town's name, it wasn't found in Rosetta. It was actually discovered in the ruins of the Fort St. Julien, near the mouth of the Nile, downriver from Rosetta.

that had been used in Egypt since the Hellenistic period around 300 B.C. As there was no way to decipher either the hieroglyphs or the demotic text—both forms of these languages had long since been forgotten—the scholars focused on the Greek inscription that they could read. This revealed that it was a decree issued in Memphis on the 18th day of the second month of the season of *Peret* (March 27 of the year 196 B.C.) commemorating the accession to the throne of the Pharaoh Ptolemy V Epiphanes.

The text itself said little of historical significance. Its final section, however, gave the scholars an extraordinary spark of hope. It explained that the priests had ordered copies of the decree to be inscribed on stone for display in principal temples: First the "sacred words" of the priests—or hieroglyphs—then in the demotic form used by the common people, and finally in Greek. It was a revelation. The scholars realized that what lay before them was the same text in three different forms, and that, knowing Greek, they now held the key to unlock the two ancient Egyptian writing systems whose meanings had been hidden for centuries. Appreciating the stone's value, Napoleon ordered that several copies be made so that as many scholars as possible could study the text. These were later transferred to the Institut National of Paris, France's main scientific body. The stone's discovery occurred at a difficult time for the French forces in Egypt. After Napoleon's departure, in the face of constant harassment by British troops and their Ottoman allies, their situation went from bad to worse. Given the precarious circumstances, the French scholars in Cairo decided to send its collections, including the Rosetta stone, to the relative safety of Alexandria. However, the French Army was soon defeated by the British, and at the end of August 1801 Alexandria surrendered.

The Spoils of War

The treaty of surrender contained a clause stipulating that all objects collected by the Institut d'Égypte, including documents and artifacts, both natural or man-made, would now become the property of the British. This included, of course, the Rosetta stone. The British general Lord Hutchinson was determined that the French would comply with the treaty to the very letter. The French scholars, led by Geoffroy Saint-Hilaire, were horrified to think that their research was about to be snatched from them. In desperation, Saint-Hilaire even threatened to burn the collection before the British entered Alexandria. "You seek fame," he wrote to Hutchinson, "So, trust the remembrance of history, for you too will have burned a library at Alexandria." He and his fellow scientists even offered to personally accompany the collections to Britain, rather than be parted from them. The frustrated Gen. Jacques-François Menou, commander of the French forces in Egypt, drew a comparison with the many specimens that had been collected: "I don't know if these scholars would themselves consider being stuffed for the purpose, but I can assure you, if the idea appealed to them, I shall not stop them!" The threats and bloody-mindedness of the scholars paid off. The British agreed to take only the most significant objects from the Institut d'Égypte, leaving the French the bulk of the collections and documents.

One of the principal objects slated for handover was the Rosetta stone. In a desperate attempt to keep the great artifact, when the undersecretary of the Institut d'Égypte compiled the inventory he included a note to the effect that the stone was the personal property of General Menou. Meanwhile secret plans were

TEMPLE OF ISIS ON PHILAE

This has the last known hieroglyphic inscription, dated as A.D. 394. In the sixth century the Byzantine emperor suppressed the old rites of this temple, and soon all practical knowledge of hieroglyphic writing disappeared.

JIM HENDERSON/ALAMY/ALAMY

BRIDGEMAN/ACI

NAPOLEON IN EGYPT

In 1798, the French crushed a revolt centering on Cairo's Great Mosque. Painter Henri Lévy depicts Napoleon in heroic pose. Egyptians, however, described scenes of desecration and plunder.

being made to smuggle their most coveted find to France, temporarily storing it at Menou's own Alexandria residence. The British sniffed out the plot and Hutchinson sent a colonel, backed up with a contingent of troops and a cannon, to demand that the stone be handed over. "You want it, Monsieur General? Take it, then . . . you may collect it when you please," wrote a resigned Menou. The British put the stone aboard a frigate bound for Portsmouth, where it landed in February 1802. The stone's changing fortune was summed up by the simple inscription painted on it in white: "captured in Egypt by the British Army in 1801."

On March 11, 1802, the Rosetta stone was presented at London's Society of Antiquaries. Plaster impressions were taken and sent to British universities. At the same time, copies of the Greek translation were sent to associated international institutions. The transfer of the great stone did not, however, end the wrangling between Britain and France. The French themselves had copies, and scholars on either side of the English Channel embarked on a frantic race to be the first to decipher the stone. Working with the Greek text, the first studies concentrated on interpreting the demotic writing. It was a French orientalist, Antoine Isaac Silvestre de Sacy, who first managed to isolate the name of Ptolemy. Later, Swedish scholar Johan David Åkerblad deciphered 29 signs. British physician and linguist Thomas Young made another crucial step when he proved that the demotic form was a cursive or longhand version of the hieroglyphs. He also discovered that the names of kings were written within cartouches, oval-shaped hieroglyphs. Young compiled 86 examples of words in demotic but he gave them incorrect phonetic values.

"I've got it!"

Building on Young's findings, a French orientalist, Jean-François Champollion, finally found the definitive key to reading the hieroglyphs and unlocking Egypt's ancient past. Thanks to his mastery of the Coptic language, which he confirmed as the modern successor of the ancient Egyptian languages, Champollion managed to correctly identify every one of the symbols making up the cartouche containing the name of Ptolemy, as it appeared on the stone. He used this knowledge to decipher the signs for all the foreign rulers of Egypt. *"Je tiens l'affaire!*—I've got it!" Champollion cried out to his brother on September 14, 1822, on realizing that he had cracked the code. That year he published his famous *Letter to Monsieur Dacier*, in which he laid out the idea—highly novel at the time, and, as it turned out, wholly correct—that hieroglyphs could be read as having both phonetic and ideogrammatic values. Champollion had at last gotten to the bottom of the mystery; his solution would enable the deciphering of the whole sacred hieroglyphic system. After their long silence, these symbols, which had once captured the thoughts, feelings, and wisdom of minds long gone, would be able to speak once more. ■

BÁRBARA RAMÍREZ
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Learn more

FILM
Secrets of the Rosetta Stone, 2006.

BOOKS
The Linguist and the Emperor: Napoleon and Champollion's Quest to Decipher the Rosetta Stone
Daniel Meyerson, Random House, 2005.

Cracking the Egyptian Code: The Revolutionary Life of Jean-François Champollion
Andrew Robinson, Oxford University Press, 2012.

The Rosetta Stone and the Rebirth of Ancient Egypt
John Ray, Harvard University Press, 2012.

TOMB OF SETI I

The French discoveries led many European archaeologists to explore Egypt. Champollion studied the tomb of this pharaoh, taking from it two painted reliefs representing Seti I and the goddess Hathor. They are now at museums in Europe.

ARALDO DE LUCA

CHAMPOLLION, THE CODE BREAKER

Jean-François Champollion assumed that the names of the non-Egyptian kings in the cartouches of the Rosetta stone must have been written as they were in Greek—phonetically—and that female proper names must be inflected to show their gender. By carefully comparing cartouches, he built up correct phonetic values for the hieroglyphs they contained. He also discovered that they can be interpreted according to the direction in which the hieroglyphs face, both horizontally and vertically. The task was made even harder because the language has no vowel markings, only semi-consonants, which can be seen in Champollion's transcription (right). Normally in such transcriptions, vowels would be added to make interpretation easier.

HERITAGE IMAGES/GETTY RES

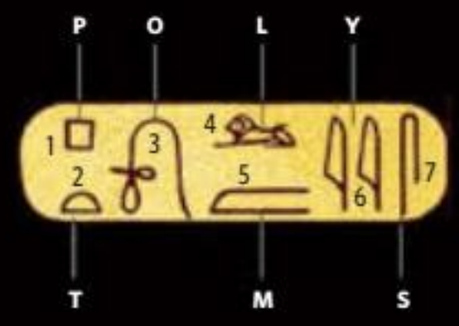
NOTEBOOK BELONGING TO JEAN-FRANÇOIS CHAMPOLLION

BRITISH MUSEUM/RMN-GRAND PALAIS

DAGLI ORTI/ART ARCHIVE

PTOLEMY

Of the six cartouches with Ptolemy's name to appear on the stela, Champollion began isolating the simplest, comparing it with the phonetic signs that, according to Silvestre de Sacy, formed the name of the king in the demotic section of text on the Rosetta stone. He managed to find the signs for P-T-O-L-M-Y-S, but only after careful cross-referencing with other ancient writings to ensure his discovery was correct.

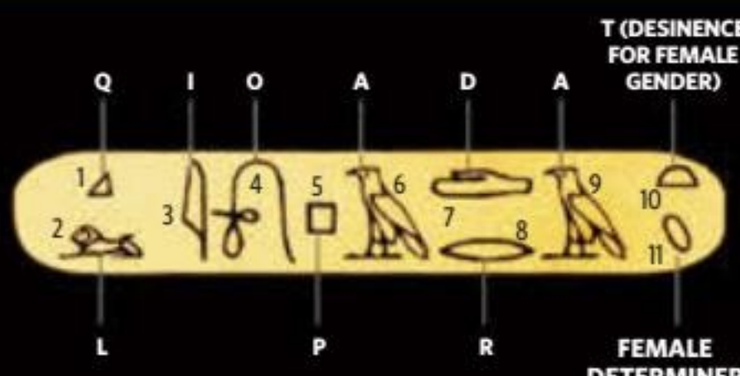


PTOLEMY V, REPRESENTED ON A COIN MINTED DURING HIS REIGN (205-180 B.C.)

BRIDGEMAN/ACI

CLEOPATRA

From the cartouches of the Philae Obelisk, Champollion identified the name of Ptolemy VIII and another name with feminine inflection. Deducing that the "i" can be written in two ways, he applied what he had isolated of Ptolemy's name to the other hieroglyphs and obtained the name of Ptolemy's wife: Cleopatra III.

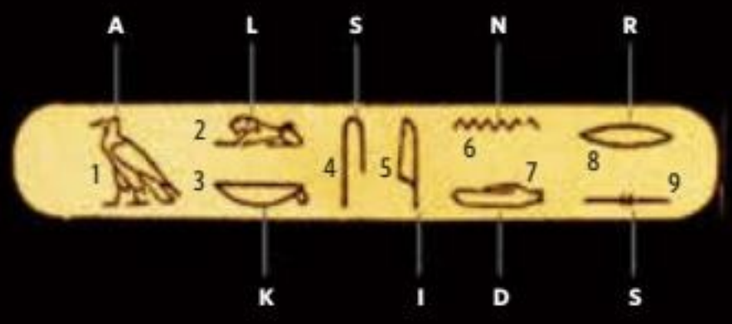


CLEOPATRA II OR CLEOPATRA III, MARBLE BUST IN THE LOUVRE MUSEUM.

E. LESSING/ALBUM

ALEXANDER

Champollion applied the same phonetic values to all the kings of Greek or Roman origin, applying his gifts for deduction to the list of the rulers of Egypt as had been drawn up by the Ptolemaic-era priest and historian Manetho. In this way, he deciphered the name of A-L-K-S-I-N-D-R-S: Alexander the Great.

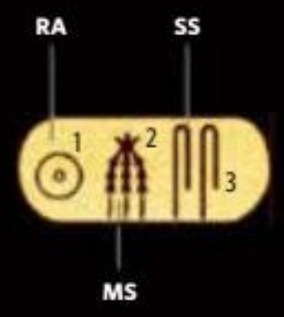


ALEXANDER THE GREAT, REPRESENTED ON A COIN MINTED IN THE REIGN OF PTOLEMY I (305-283 B.C.)

GARY COOK/ALAMY/ACI

RAMSES

Examining a copy of the inscriptions of the temple at Abu Simbel, Champollion linked a circular sign on a cartouche to the Coptic name for the sun: Ra. Following the circle was a sign that in the Rosetta stone's Greek text meant "anniversary," and following that, a double "s." He reasoned that the name was Ramses, with the sign for "anniversary" also standing for the sound "ms." If he replaced "anniversary" with "birth" (using the Coptic translation of the Greek), Ramses would mean "Ra begot him" or "Ra gave him birth."



RAMSES II, MONUMENTAL STATUE CARVED INTO THE FACADE OF THE GREAT TEMPLE AT ABU SIMBEL.

VANNINI/CORBIS/CORDON PRESS

THUTMOSE

Following his Ramses breakthrough, Champollion focused on another cartouche on his copy of the Abu Simbel inscriptions. In this case the cartouche included the sign of an ibis, which the French scholar identified as a symbol of the god Thot (the Greek form of the Egyptian "Djehuty"). This was followed by the alphabetical values of "ms" and then a simple "s." He realized that this must be the cartouche of Thutmose, translated as "Thot gave him birth."

THUTMOSE III, STATUE CREATED DURING HIS REIGN (CIRCA 1479-CIRCA 1425 B.C.)

The imposing Temple of the Great Jaguar, in Tikal's Great Plaza, has become an iconic symbol of the Maya world. The jade mask (opposite) once covered the face of King Jasaw Chan Kawiil I, whose reign in the seventh and eighth centuries helped Tikal grow into a city of unprecedented size and splendor.

SIMON NORFOLK/NB PICTURES/CONTACTO

ART ARCHIVE

THE LOST JUNGLE KINGDOM

TIKAL

Above the lush green canopy of Guatemala's jungle peeks the proud remains of a city that embodies all the majesty and wonder of Classic Maya civilization.

CARVED OUT OF THE JUNGLE

The city we call Tikal was probably once known by the Maya name Mutal. The North Acropolis (left) is one of Tikal's oldest areas; Temple I, or the Temple of the Great Jaguar (right), is around 150 feet tall.

To "enter the water," for the Maya, was to die. In the cosmology of this culture, the deceased passed through water to access the kingdom of the dead, known as Xibalba. It's a suitably evocative description for a civilization that itself mysteriously disappeared, its cities submerged beneath dense layers of jungle. The story of the rise and fall of its greatest city, Tikal, is in many ways representative of the intriguing story of this most enigmatic culture.

The Maya civilization flourished between the fifth century B.C. and the 16th century A.D., extending across 115,000 square miles of what today includes Mexico, Guatemala, Honduras, and Belize. Of the many significant achievements of the culture of the Maya, it is perhaps their remarkable enthusiasm and capacity for building that is most immediately astonishing: in a hostile environment of dense tropical forests and swamps, the Maya constructed hundreds of splendid stone cities packed with ornately decorated monumental architecture. Among the pantheon of Maya cities, with their exotic names such as Palenque, Copán, Calakmul, and Uxmal, one stands out for both its exceptional size and extraordinary quality—Tikal. Carved out of the jungles of Guatemala, and all but unknown for a millennium, Tikal covers an estimated 46 square miles and is one of the most extraordinary monuments in the Americas.

Tikal's vine-covered ruins were discovered in 1848. Travelers, including the Spanish conquistador Hernán Cortés, may have passed close by, and locals must have wondered at the remains, but the story of the kings who built and ruled this powerful city is only today being slowly pieced together. Even the name of the city is a recent creation: Tikal means "the place of voices," in reference to the sounds of the surrounding forest. It is an appropriately haunting name, but experts now believe the Maya called the city Mutal, meaning "knotted hair." This is, at least, the glyph they used to identify it in inscriptions.

Today visitors to this immense city can only see the small area that has been excavated and restored. Here imposing buildings emerge from

PANORAMIC IMAGES/GETTY IMAGES

the clipped lawns and neatly trimmed vegetation to tower over the treetops. It is a breathtaking sight that offers a tantalizing glimpse into an even more magnificent Maya world. In ancient times these great buildings were extensions of the vividly painted stucco paving upon which the temples and palaces stood.

The Birth of Tikal's Divine Kings

The Maya world was divided into city-states, urban centers controlling a territory that rarely exceeded 1,200 square miles. Stronger cities dominated weaker ones, subjugating them as vassals, but almost every city had its own king, the *ahau* (lord) or, sometimes, *kul ahau* (holy or divine lord). So when did royalty arise in Tikal? It's a question as steeped in mystery as the Maya themselves. The first signs of kings come from the predynastic era, which began in the fifth century B.C. and extended to A.D. 292. However, there is no irrefutable evidence from that period of a political system centered around a person or a lineage, as there would be with later hereditary monarchies. The inscriptions point to a name, Yax Ehb Xook, as the possible founder of Tikal's first royal dynasty in the first century A.D. Unfortunately, we have no other evidence of his existence.

If we exclude this elusive sovereign, the first ahau of Tikal was probably known as Balam Ajaw, a name deduced from the decoration on a stela, a ceremonial carved stone slab, erected in the year 292. We know almost nothing of the several kings that followed until the rule of Siyaj Chan Kawiil I, around 307. He was succeeded by a woman, Une Balam, and another king, named Kinich Muwaan Jol. His son, Chak Tok Ichaak I, appears on various stelae. He ascended to the throne in 360 and died in 378, most probably at the hands of invaders from Teotihuacan, who conquered Tikal in that same year.

Tikal Falls Under Foreign Rule

The conquest marks the start of Tikal's second dynasty, which could be called "Teotihuacanian." They came from the powerful metropolis of Teotihuacan, close to what is now Mexico City and more than 600 miles from Tikal. Yet

ATTACK FROM THE NORTH

In 378 an army from Teotihuacan invaded and conquered Tikal, establishing a new Teotihuacanian dynasty that included King Siyaj Chan Kawiil II, whose tomb contained this painted censer.

ART ARCHIVE

AKG/ALBUM

TIKAL AND ITS HINTERLAND

THE TERRITORY THAT A MAYA KING ruled over was the *ajawlel*. By the Late Classic period the lands controlled by the ajawlel of Tikal, extending through the Maya lowlands and into the forests of the Yucatán Peninsula, may have included over 38,000 square miles. Farmland, dependent cities, and the capital were at the core of the kingdom, divided into provinces, or *tzuk*. There were hundreds of dependent city-states with varying degrees of power and influence, organized by networks of kinship, alliances, or subjugation and domination. Although many had autonomous governments, all made tribute payments to Tikal in the form of goods and labor, or even assistance in trade or war.

A TRIBUTE PAYMENT, DEPICTED ON A PAINTED MAYA CUP A.D. 600-900

THE ROYAL COURT

The kings of Tikal were all-powerful semidivine rulers. Their court, the people closest to them, included members of the royal family, civil servants, and artisans. This jade chest ornament shows a Tikal king (center) with a courtier (left).

BRIDGEMAN/ACI

Teotihuacan's influence and domination spread far and wide. It is very likely that this dynasty established its seat of power in the area of Tikal known as the Lost World. Here archaeologists have found a 98-foot-tall pyramid that clearly displays features of Teotihuacan architecture, including walls that alternate slopes *(taludes)* with vertical panels *(tableros)*.

Siyaj Chan Kawiil II, who ruled circa A.D. 425, during Tikal's second dynasty, built a magnificent stela to record the events of his reign, especially those that would reinforce his right to govern. This was a key purpose of Maya stelae, which were erected at specific times, principally the end of each 7,200-day period *(katun)*, and sometimes every 3,600 days *(lajuntun)*, or every 1,800 days *(jotun)*. The stelae served both as a focus for the worship of the king and as a powerful piece of political propaganda. Through their beautiful glyphs, the stylized picture writing carved into the stone slab, monarchs expressed their legitimacy, bragged about their bravery, boasted of their links to the gods and the cosmos, talked about the deeds of close relatives, and commemorated the dates of their ascension to the throne and their death.

The stelae relate in some detail the reigns of Siyaj Chan Kawiil II and his son and grandson, but soon after comes a string of rulers about whom we know next to nothing. It seems that around 508 Tikal was plunged into a period of political unrest, which may have been caused by the end of a dynasty and a subsequent power struggle between rival factions. Of the stelae that exist from this turbulent period, the most noteworthy is one devoted to a woman who inherited the throne as a young girl.

But the real problems seem to have hit Tikal in 562, when the inscriptions cease entirely. It was then that the great Teotihuacan empire, whose cultural legacy extends throughout Mesoamerica, began to decline and pull out of distant lands such as Guatemala. Two indicators of grave problems in Maya cities are the interruption of the normally incessant building activity and the failure to carve and erect more stelae—which

J. FUSTÉ RAGA/AGE FOTOSTOCK

happened in Tikal during the second half of the sixth century and most of the seventh century, a period known as the Middle Classic Hiatus, about which very little information is available.

The Land Pays Tribute to Tikal

Around the eighth century, after the collapse of the Teotihuacan empire, Tikal recovered its independence and ushered in a period of unprecedented splendor. This era—the last in its history—saw the building of Tikal's most important monuments and a flourishing of architecture and the arts; the city grew to its greatest size, and its temples reached extraordinary new heights and dimensions.

Tikal came to dominate the entire region, thanks largely to the rule of two great kings. The first was Jasaw Chan Kawiil, architect of the great military victory of 695, in which Tikal defeated its long-standing archenemy, Calakmul, located in the present-day Mexican state of Campeche. He also inspired the construction of what historians call Temples I and II. In fact, Jasaw was buried in Temple I, which has become a favorite icon of Maya civilization due to its stylized silhouette and its towering height of around 150 feet. When Jasaw's tomb was excavated, archaeologists found a wealth of exquisite artifacts, including a jade mosaic vessel, a large jade necklace, and 37 bones carved so skillfully with glyphs that they are considered unparalleled in Maya art.

The son of this great ahau was Yikin Chan Kawiil. He was celebrated for extending Tikal's power in every direction, winning victories over kingdoms including Calakmul, Yaxhá, and Wak Kabnal. He is also associated with Tikal's largest pyramid, indeed the biggest temple ever built by

THE PYRAMID OF THE SUN

This vast monument in Teotihuacan (above) was built using the distinctive *talud-tablero* (slope-and-panel) style and symbolized the immense power of an empire whose influence extended as far south as Tikal.

After the Classic Maya civilization collapsed, Tikal was abandoned to the forest.

CYLINDRICAL VESSEL FROM TIKAL, CIRCA A.D. 400-450

AKG/ALBUM

OTIS IMBODEN/NGS

THE NORTH ACROPOLIS

The North Acropolis (above) is where archaeologists have discovered the remains of the first known rulers of the great Maya city. Most were buried in great vaulted chambers that contained an array of grave goods.

the Maya. More than 200 feet tall, Temple IV contains 298,000 cubic yards of earth and rises like a colossal mountain in the heart of the ancient city. It is possible that Yikin Chan Kawiil is buried within this formidable structure, although his tomb has yet to be found.

Even so, Tikal has provided archaeologists with the best evidence that the Maya pyramids were, first and foremost, funerary temples: They were designed to serve as both the king's mausoleum and as a monument celebrating his lineage. Before the arrival of the Teotihuacanos, Tikal's rulers were buried in the bowels of these enormous structures, including the North Acropolis and the Lost World. As excavations continue, they will surely unearth the tombs of many more Maya kings.

Despite its enormous power, Tikal could not escape the terminal crisis—called the "collapse" by historians—that gripped the Classic Maya world between the ninth and tenth centuries. This was the dramatic result of several factors: The tensions between highly centralized despotic monarchies and an enlarged and ambitious aristocracy; population growth and the resulting overexploitation of the land, accentuated by harsh droughts; the oppressive demands for tribute in produce and labor that weighed heavily on the peasant class; and the increasingly frequent wars, which caused untold suffering. Under such pressures, Tikal collapses, its pyramids and palaces swallowed up by the jungle. The last stela was carved in the year 869, and with that, the sprawling metropolis, which had once housed up to 100,000 people, disappeared beneath the thick tropical vegetation for a thousand years.

Kings, Priests, and Peasants

In 1971, while excavating near Tikal, I stumbled across an indigenous hunter who told me the story of the origin of the world, a story very similar to the creation myth that appears in the Maya text of the *Popol Vuh*. My most vivid memory of that encounter are the words he spoke while watching the monkeys howling high in treetops: "These are the men of the world before our own; they were wooden men, and they were turned into monkeys because they didn't show respect for the gods who had created them." Perhaps that Maya man believed that the modern world had been the creation of the city of Tikal, and

GULF OF MEXICO

GOLFO DE CAMPECHE

Bay of Campeche

Punta Holohit

Punta Yalkubul

Isla Cerritos

Cabo Catoche

Contoy Island

Isla Mujeres

Xcambo

Dzibilchaltún

Mérida

Aké

Izamal

Culuba

Ek Balam

El Meco

Acancéh

Balankanche Cave

Xcaret

Chichén Itzá (898)

Oxkintok

Uxmal (907)

Mayapán

Cobá

Tancah

San Miguel-Cozumel

Isla Cozumel

Jaina

Xcalumkin

Kabáh

Sayil

Xlapak

Labná

Okop

Muyil

Tulum

Campeche

Edzná

Punta Allen

Punta Pájaros

Chacmool

Punta Herrero

PUUC

YUCATÁN

CAMPECHE

QUINTANA ROO

MEXICO

BELIZE

CARIBBEAN SEA

Carmen Island

Punta Frontera

Punta San Juan

Laguna del Carmen

Balamku

Becán

Dzibanché

Ichpaatún

Chetumal

Xpuhil

Hormiguero

Río Bec

Kohunlich

Santa Rita

Cerros

Banco Chinchorro

Comalcalco

TABASCO

Villahermosa

Itzamkanac

Oxpemul (830)

La Muñeca (889)

Uxul

Calakmul (810)

Cuello

Balancán

Río San Pedro

La Milpa

El Mirador

Naachtún

Nakbé

Río Azul

Lamanai

Belize City

Tortuguero

Río Tulijá

Palenque (795)

Pomona (780)

Uaxactún (889)

Xultún (889)

Holmul

Tikal (889)

Turneffe Islands

El Perú

El Zotz

El Naranjo

Belmopan

Piedras Negras (810)

Timbal (889)

Xunantunich (849)

El Cayo

Yaxchilán (808)

La Florida

Tayasal

Yaxhá (793)

Ucanal (849)

Caracol (859)

La Marr

Toniná (909)

La Amelia (807)

Río Usumacinta

Río Pasión

El Ceibal (889)

Ixkún

Sacul

Palenque (799)

Machaquilá (841)

Ixtutz (879)

Altar de los Sacrificios (879)

Aguateca (790)

Lubaantun

Chinkultic (810)

Comitán (874)

Tama-rindito

Naj Tunich

Pusilhá

Río Lacantún

Dos Pilas

Cancuén

Xutilha

Cabo de Tres Puntas

Punta Sal

Punta Izopo

Quen Santo (879)

Lagartero

GULF OF HONDURAS

OAXACA

CHIAPAS

GUATEMALA

Lago de Izabal

Las Flores

Travesía

Santa Ana

Naco

Quiriguá (810)

Nebaj

Chuitinamit

Cahyup

Río Motagua

Utatlán

Izapa

Copán (820)

San Agustín Acasaguastlán

Guatemala City

Abaj Takalik

El Baúl

Iximché

Kaminaljuyú

HONDURAS

Asunción Mita

Yarumela

Calamuya

Tegucigalpa

La Democracia

Cihuatán

Tazumal

Cerén

San Salvador

EL SALVADOR

Santa Rosa

Corobán

Cara Sucia

Asanyamba

PACIFIC OCEAN

Maya city

(869) Last date inscribed in the city

Commercial routes: by land / by sea

Salt Products traded

PETÉN Historical region

BELIZE Country

Capital city

YUCATÁN Mexican state

Mexican state capital city

CARTOGRAFÍA: EOSGIS

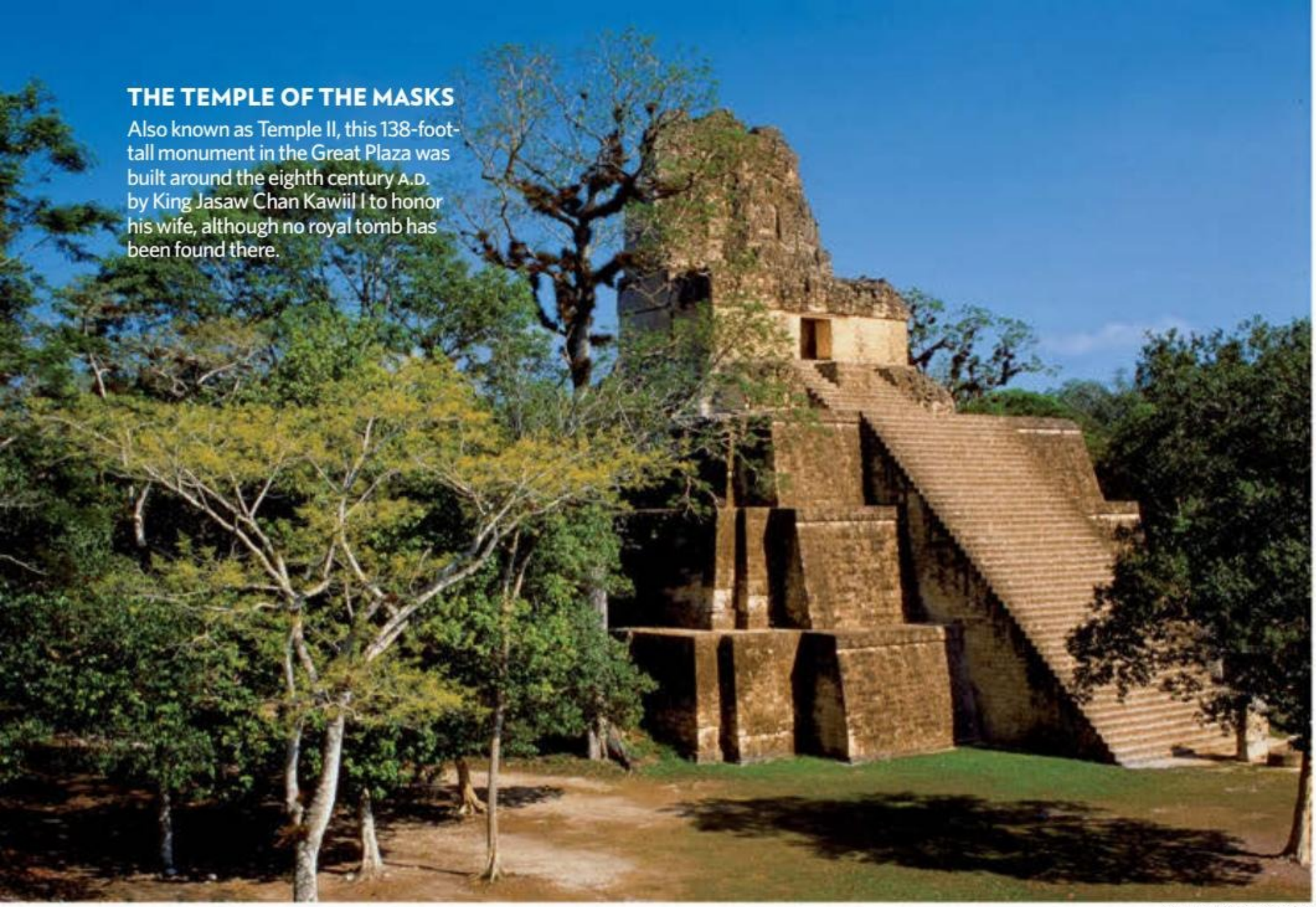
SPLENDOR AND CRISIS IN THE MAYA WORLD

WHEN THE MAYA civilization reached its height, between the sixth and eighth centuries A.D., the Maya lowlands were filled with cities. This sophisticated urban world, linked by a network of roads known as *sacbeob*, was made possible by the work of the peasants, who made up the majority of an ever growing population; it is believed that the population density in the area around Tikal may have reached 400-500 inhabitants per square mile. The pressure this placed on natural resources, in addition to the demands of Maya rulers, created dangerous tensions that gave rise to near-constant war. Monarchs, unable to assure their subjects' survival, faced a crisis, and the cities, being the seats of court and centers of power, did so as well. It was these factors that led to the ninth century Maya "collapse," and, ultimately, to the abandonment of their cities.

WERNER FORMAN/GTRES

WERNER FORMAN/GTRES

SCULPTURES FROM THE MAYA WORLD: A FEMALE FIGURE AND A WARRIOR, NATIONAL ANTHROPOLOGY MUSEUM, MEXICO CITY



THE TEMPLE OF THE MASKS

Also known as Temple II, this 138-foot-tall monument in the Great Plaza was built around the eighth century A.D. by King Jasaw Chan Kawiil I to honor his wife, although no royal tomb has been found there.

GIOVANNI SIMEONE/FOTOTECA 9X12

THE ART OF THE MAYA

The Maya were skilled artisans, especially when it came to creating ceramics. The richly decorated box below, found in excavations at Tikal, is beautifully painted and has a lid that is topped with an animal head.

the monkeys were its descendants, just as the Aztec had located the origins of their world in the abandoned city of Teotihuacan.

Either way, Tikal is an excellent example of the Classic Maya city, including the roles that buildings and open spaces played, and the crucial interaction between them. In contrast to our modern idea of urbanization, Maya cities were not designed as residential areas. The Preclassic Maya (1000 B.C. to A.D. 250) created these clusters of stone structures as ceremonial centers and spaces for ritual activity. These urban areas were therefore primarily political and religious in nature and purpose. The people who lived in them were usually members of the governing family, as well as civil servants, priests, warriors, artisans, merchants, servants, and slaves, that is, all those needed to keep the Maya city-states running smoothly. The peasants, the bulk of the population, lived outside the city, close to the lands they farmed. It was from there that they would be called to work on the stelae, monuments, and buildings, quarrying limestone, or cutting wood for the bonfires that made lime for the stucco that covered the city's floors and walls.

Not all the temples were built in the pyramid shape commonly associated with the Maya. In fact, temples came in all shapes and sizes; many state buildings were dedicated to gods or hosted religious rituals or ceremonies—the qualifying criteria for sacred places in the Maya world. What we call palaces—because they are the buildings where we believe kings and their court carried out political and administrative tasks—were also, to a certain extent, temples. This was not only because the king was considered a descendant of the gods, but also because the monarch officiated over religious ceremonies held inside them.

It is important to appreciate the central role that plazas played in Tikal and other Maya cities, which were were effectively designed around these open spaces. The city of Tikal was divided

ART ARCHIVE

Tikal was designated a UNESCO World Heritage site in 1979.

THE GREAT PLAZA OF TIKAL IN ALL MESOAMERICAN CULTURES THE PLAZA WAS THE PRIMARY FEATURE AROUND WHICH THE URBAN SPACE WAS ARRANGED. IT SERVED AS A MEETING PLACE AS WELL AS A MARKET.

M. ROBINSON/CORBIS/CORDON PRESS

IN THE HEART OF THE KINGDOM

Surrounded by colossal monuments and buildings, the Great Plaza was the ceremonial and religious center of Tikal. The space was planned and laid out by King Jasaw Chan Kawiil I of the Teotihuacan dynasty, circa 682.

1 Temple I This is known as the temple of the "Great Jaguar" because it has a lintel featuring a magnificent jaguar sculpture. It was built by Yikin Chan Kawiil as a funerary monument to his father, Jasaw, whose tomb was discovered inside in 1962.

2 Lintels The temples had carved wooden lintels. Today, two remaining fragments are in the collection of the British Museum, in London.

3 Stelae These stone monoliths, erected at precise intervals of time, were arranged in front of the temples and told of the exploits of Tikal's rulers and their families.

4 North Acropolis This space holds the funerary temples of the monarchs of the Early Classic period (A.D. 250-600).

JASAW CHAN KAWIIL'S JADE FUNERARY VESSEL IS TOPPED WITH AN EFFIGY OF THE GREAT KING OF TIKAL, WHO RULED IN THE SEVENTH AND EIGHTH CENTURIES A.D.

KENNETH GARRETT

A Royal Sacrifice: Giving Blood to Gods

The *Popol Vuh,* the sacred book of the Maya, tells the story of the gods' decision to create man, a being whose offerings, prayers, and sacrifices would guarantee them the nourishment necessary to regenerate and sustain the cosmos.

IN KEEPING WITH THIS VIEW of the world, the ancient Maya didn't hesitate to shed blood to satisfy the gods and thus guarantee the continuity of the universe. Bloodletting, one of the primordial events in the Maya creation myths, was always present in their rituals. In addition to the frequent sacrifice of prisoners captured in war, the most important ritual was the self-sacrifice of the royals, since their blood was much more powerful than that of other mortals. On great state occasions such as coronations, weddings, and the forging of alliances, the kings and queens would run sharpened thorns through their tongues or genitals. The blood they spilled would be collected on papers and burned so that the smoke would carry the offering up to the gods.

AKG/ALBUM

QUEEN XOC MAKING A SELF-SACRIFICE TO THE GODS, ON A STELA FROM YAXCHILÁN, DATED A.D. 726

into architectural sectors, between which were plazas, and within them were courtyards. The plazas organized the flow of pedestrians and acted as the meeting place for the crowds attending ceremonies. The openness enhanced the majesty of the monumental buildings and sculptures built around it, ensuring that they could be fully appreciated from the proper angle. The smaller courtyards were surrounded by groups of related buildings. While courtyards acted as thoroughfares for people passing through, they were above all places of rest and relaxation, where the major players in politics and war could enjoy a gentle stroll and a quiet conversation. Architectural sectors and isolated buildings were connected by special paths, called *sacbeob*, that had symbolic and ritual importance and that were usually elevated above the paved ground.

Tikal's Great Plaza must have held hundreds of people, who would have flocked from all over the kingdom to attend commemorative celebrations. The courtyards of the Central Acropolis, one of the largest Maya palace complexes ever found, were the epicenter of important political

MARTIN ENGELMANN/AGE FOTOSTOCK

decision-making, such as the prosecution of the war with Calakmul. Through these courtyards passed the ambassadors of the most important kingdoms; here sat the women of the royal family watching the sunset while enjoying the cool of the evening; and through them were dragged the captive brave warriors on their way to humiliation and torture.

The Twin Pyramids

Tikal also includes groups of unusual buildings called the "twin pyramid complexes." Though these also appear in other Maya cities, in Tikal they may have been used for special activities. They are made up of two pyramidal plinths, each with a sanctuary on top, and facing each other east and west across a plaza. To their north is a roofless enclosure containing a stela, and to the south, a palace with nine doors, believed to represent the nine levels of the Maya underworld. It seems likely that these complexes were cosmological representations, erected every 7,200 days to celebrate the consummation or finalization of a katun, a time interval important to the Maya. There were also structures for playing ball games, as well as large water tanks, and possibly steam baths.

Yet the functions of many of Tikal's buildings remain infuriatingly unclear; understanding their purpose is a task that may never be completed. The Maya, with their fondness for riddles, have left us many mysteries to solve, but Tikal's numerous unexcavated areas, hidden beneath the jungle, just may hold some of the answers. ■

MIGUEL RIVERA DORADO
DORADO HAS BEEN EXCAVATING, LECTURING ON, AND WRITING ABOUT MAYA SITES FOR OVER 25 YEARS.

THE ENEMIES OF TIKAL

In the sixth and seventh centuries A.D., during the period known as the Hiatus, Tikal was defeated by its great rival, the city-state of Calakmul, and its ally Caracol (shown above).

Learn more

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A Forest of Kings: The Untold Story of the Ancient Maya
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The Maya
Michael D. Coe, Thames & Hudson, 2011.

WEBSITES

www.parque-tikal.com

whc.unesco.org/en/list/64

WRITTEN IN STONE: A FOREIGN

Teotihuacan was the greatest power in ancient Mesoamerica, a dominant civilization from the Valley of Mexico, centered in possibly the largest city in pre-Spanish America. The grid layout of the metropolis covered an estimated eight square miles and may have been home to over 150,000 people. Their culture was spread far and wide through diplomacy, trade, and war. In 378 they conquered Tikal, in the Maya heartland, recording their story on what is known as Stela 31.

KENNETH GARRETT

CENSER FOUND IN TIKAL'S BURIAL 48, BELIEVED TO BE THE TOMB OF KING SIYAJ CHAN KAWIIL II

1 THE ARRIVAL OF THE INVADERS

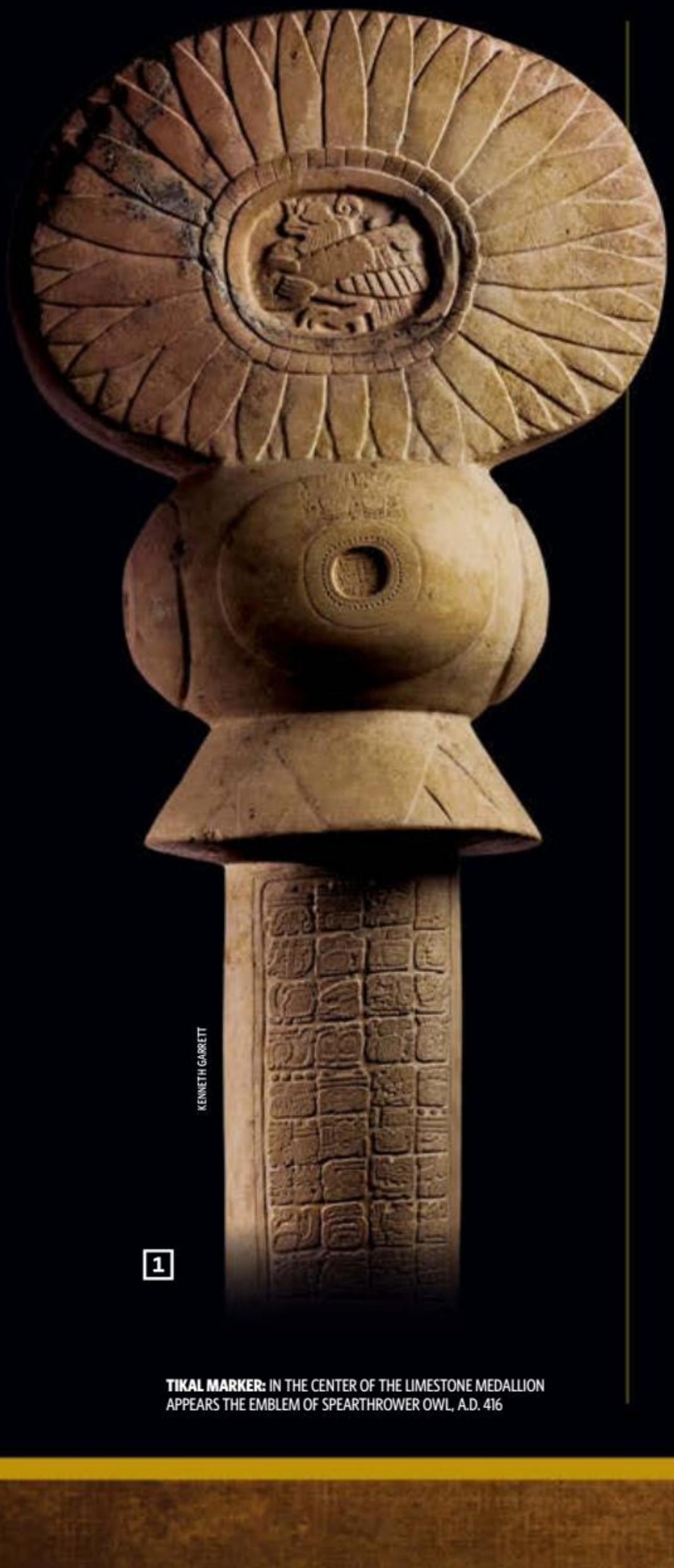
The artifact from Tikal known to historians as Stela 31 narrates how on January 16, 378, Siyaj Kak (Fire is Born) arrived at Tikal, and that on that same day the Tikal king Chak Tok Ichaak I (Jaguar Paw) died. The Tikal Marker also tells of the arrival of Siyaj Kak, who it states was sent to Tikal by the sovereign of Teotihuacan, known as "Spear-thrower Owl," who it says had ascended the throne of the mighty empire in 374.

2 A NEW KING FOR TIKAL

According to Stela 31, king Yax Nuun Ayiin I (Curl Nose) came to the throne in Tikal in 379 under the supervision of Siyaj Kak. It is very possible that the new king was the son of Spearthrower Owl. The stela shows Yax Nuun Ayiin I wearing the headdress and carrying the shield typical of the warriors of Teotihuacan. He is also wearing a shell necklace, a decoration often worn by that city's princes.

3 THE ARRIVAL OF SIYAJ KAK

In 411 Siyaj Chan Kawiil II (previously called Stormy Sky), son of Yax Nuun Ayiin I, ascends to the Tikal throne. A few years later he erects Stela 31. It shows him holding the royal headdress decorated with the symbol of his grandfather Spearthrower Owl. However, his own headdress represents the founders of the Tikal dynasty overthrown in 378: The new king is presenting himself as the heir to the political traditions of both Teotihuacan and Tikal.



KENNETH GARRETT

1

TIKAL MARKER: IN THE CENTER OF THE LIMESTONE MEDALLION APPEARS THE EMBLEM OF SPEARTHROWER OWL, A.D. 416

DYNASTY ON THE TIKAL THRONE

AKG/ALBUM

2

YAX NUUN AYIIN I, IN THE TYPICAL DRESS OF THE TEOTIHUACAN WARRIORS. SIDE OF STELA 31, IN TIKAL, ERECTED IN A.D. 445

ART ARCHIVE

3

SIYAJ CHAN KAWIIL II. ON THE FRONT OF STELA 31, LIMESTONE. A.D. 445. SYLVANUS G. MORLEY MUSEUM, TIKAL

Aristotle, an intellectual, philosopher, and researcher, was interested in all aspects of knowledge. This Roman bust is a copy of an original carved in his lifetime.

DAGLI ORTI/ART ARCHIVE

THE GREAT THINKER

For 23 centuries Aristotle's ideas have had a profound and enduring influence on a broad range of subjects—he has perhaps made the single greatest contribution to human understanding as we know it.

Teacher of Kings and Citizens

384 B.C.
Aristotle is born in Stagira, a city in northern Greece. He is the son of Nicomachus, a doctor at the court of King Amyntas III of Macedonia.

367 B.C.
The young Aristotle travels to Athens to study at Plato's Academy. He stays there for 20 years until Plato, his teacher and colleague, dies.

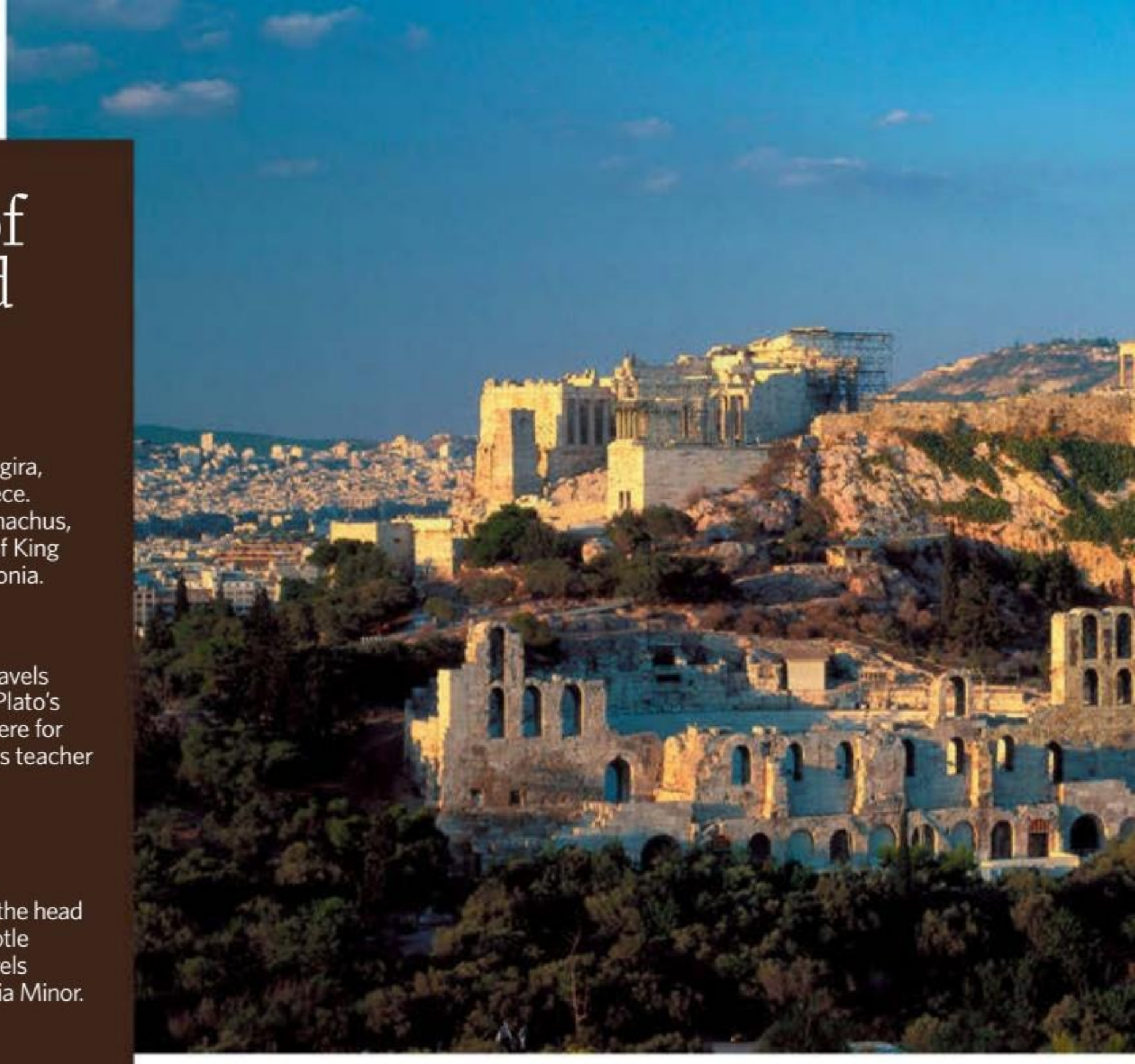
347 B.C.
When Plato's nephew, Speusippus, becomes the head of the Academy, Aristotle leaves Athens and travels around the cities of Asia Minor.

347-342 B.C.
Aristotle lives in Assos and Mytilene (Lesbos), where he teaches and marries Pythias, daughter of the tyrant Hermias, who acts as his protector.

342 B.C.
By now Aristotle is an acclaimed philosopher, and King Philip II of Macedon invites him to his court to tutor his son Alexander, the future king.

335 B.C.
When Alexander becomes king of Greece, Aristotle returns to Athens and founds his own school, the Lyceum, a popular gathering place for thinkers.

323 B.C.
Upon Alexander's death, Athens revolts against Macedonian rule. Fearing for his life, Aristotle flees. He dies of natural causes within the year.



ATHENS, THE CAPITAL OF PHILOSOPHY

Aristotle went to Athens (above) to study at Plato's Academy, a highly acclaimed seat of learning founded by the philosopher in 387 B.C. Plato was a disciple of another great Greek philosopher, Socrates.

Aristotle famously said that "All men by nature demand knowledge," and nobody demanded it more than he did himself. It is difficult to overestimate the sheer breadth of Aristotle's thought. Among his many achievements: He wrote two of the greatest treatises on how we should live, *Nicomachean Ethics* and *Eudemian Ethics;* he studied a wide range of political systems in his *Politics;* he considered the nature of existence itself in *Metaphysics.* In fact it is this word, used by Aristotle's pupils in referring to the work, that became the term for the basic study of existence. He also established the subject of logic in *Prior Analytics* and *Posterior Analytics;* he discussed and began to formulate scientific enquiry in *Physics;* he virtually invented the subject of biology in his treatise *On the Parts of Animals;* and, on top of all this and more, he found time to write the official record of the Olympic Games.

Understandably, by today's values, some of Aristotle's thought is considered fairly disreputable, and due to the advances of science,

REINHARD SCHMID/FOTOTECA 9X12

especially in recent centuries, some of his ideas have been proved entertainingly wrong. But what is truly remarkable is that so much of Aristotle's work still rings true 2,300 years later.

Where Aristotle Went Wrong

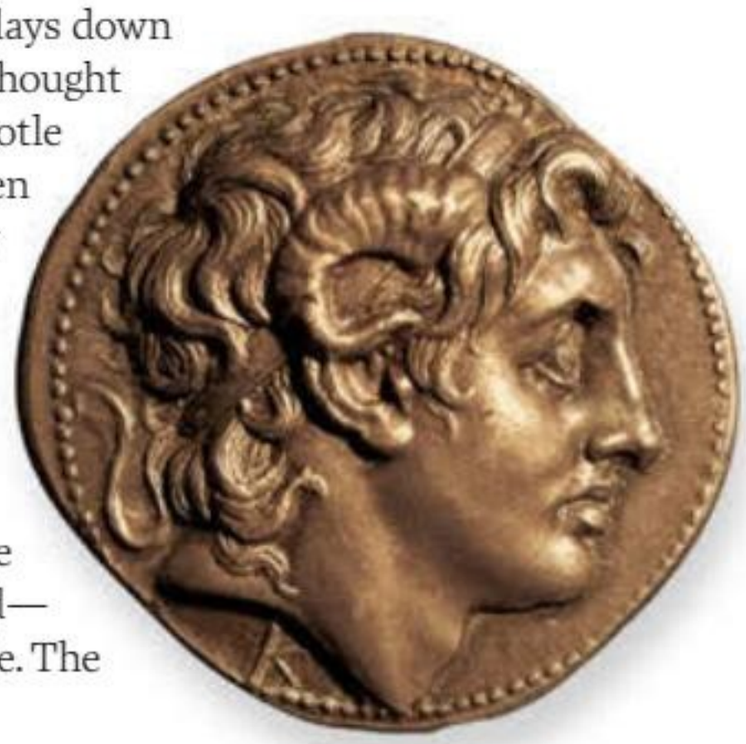
In *Politics* Aristotle makes it clear that he approves of slavery. He also firmly believes that a woman's nature makes her best fitted for a subordinate role. These ideas were in keeping with his time: The revered democracy of Athens was only a democracy for free men (not slaves, not women) who were citizens of the city-state. Nor have some of Aristotle's scientific treatises passed the test of time: It's not true that the world is composed of four elements—water, earth, air, and fire—but this was part of the worldview in ancient Greece. It was only in the 16th and 17th centuries that such explanations fell apart, as quantitative methods began to be applied to everyday phenomena.

Some of Aristotle's thoughts appear just plain odd to our modern minds. In *Physics,* for example, he argues that plants have souls. Why? Because a soul for him is a unifying element; it is what gives coherence to an element. He considers that plants need this unifying element because their roots grow toward the center of the Earth while their leaves grow toward the sky. If plants didn't have souls they would simply split in two. We would not try to take such an explanation seriously today because we do not have his prescientific worldview.

A lot of Aristotle's scientific theories have been shown to be false, but others shouldn't be discarded. In *Metaphysics* Aristotle lays down some of the most basic categories of thought still in use today. For example, Aristotle divides events into those that happen by necessity and those that happen by accident. Normally a person walks to the shops because he intends to walk to the shops, and, normally, he will get there in one piece—necessity. However, if he trips on a paving stone and falls over, then the normal course of events is interrupted—accident. The accident isn't explicable. The

TUTOR TO THE YOUNG ALEXANDER

Between the ages of 13 and 16 the future Alexander the Great (below) was taught by Aristotle, who inspired in the young prince a passion for philosophy, medicine, and science.



ERICH LESSING/ALBUM

THREE YEARS IN ASSOS

In 347 B.C. Aristotle moved to Assos (its theater is shown here), in Anatolia (present-day Turkey). In his time there he established a school, married the king's daughter, and wrote most of *Politics*.

THE PERIPATETICS

THE LYCEUM IN ATHENS

King Philip II of Macedon had entrusted Aristotle with the education of his son Alexander. Around 335 B.C. Alexander became king, and Aristotle returned to Athens, where he founded his own school, called Lyceum because it was near the temple of Apollo Lyceus (Apollo in the form of a wolf). Colleagues and students gathered at the Lyceum, where there was a library and collections of plants and animals. These were expanded as additional specimens arrived, gifts from Alexander the Great on his march through Asia. Aristotle's habit of walking with students while he lectured them led to their being nicknamed the Peripatetics. Aristotle spent 12 years at the Lyceum until Alexander's death, when Athens rebelled against Macedonian rule. Aristotle left the city in 323 B.C. The Lyceum stayed open but did not last as long or have so great an influence as Plato's Academy. However, a disciple of Aristotle's, Demetrius of Phalerum, was instrumental in creating the great Library of Alexandria, which played a key role in the history of Western culture.

person didn't decide to trip up; it just happened, so he doesn't know why the accident occurred. It is on this basis that Aristotle argues that we can only have knowledge of necessity.

Aristotle also considers the distinction between "form" and "matter" and uses this distinction to describe the essence of a thing. Essence is what a thing must have in order to be exactly that thing. For example, take the Four Tops, the Motown vocal quartet. They are still performing today, some 50 years after their first hit, but with only one of the original singers. If the essence of the Four Tops consists in their matter, then it can't survive any changes in that matter. So the Four Tops would cease to exist when one of them drops out and is replaced—or even if one of them were to have a haircut. But if the essence of the Four Tops resides in their music, then material changes can take place but the Four Tops survive.

Man the Political Animal

For Aristotle man is a political animal—his distinctive form of functioning is as part of a state

RENÉ MATTES/GTRES

AKG/ALBUM

ARISTOTLE IN HIS OWN SCHOOL

This 1885 fresco by Gustav Adolph Spangenberg imagines how Aristotle (seated, center) might have taught his students in the Lyceum, the school he founded when he returned to Athens in 335 B.C.

(to Aristotle, a polis, the Greek city-state), and he is at home and fully human in a political society—outside the polis man is "either a beast or a God." Politics is not something imposed on individuals from above but rather part of their natural state of affairs. However, Aristotle's defense of natural hierarchies led him to uphold slavery and the division of labor as both natural and just. Similarly, Aristotle's polis was always based on the restriction of citizenship to free, native, men.

Aristotle criticized both tyranny and extreme democracy. His ideal form of rule was an aristocracy, government by a relatively small privileged class with the best qualifications for leadership. But aristocracies proved unstable, so Aristotle preferred a mixed government in which citizens take turns in ruling and being ruled, with no dominant class.

Aristotle thought of the state as an organism. Tradition, rather than one person's diktat, is the best basis for laws that should evolve naturally. He rates political stability as one of the highest values, since it is only stability that can provide the conditions in which citizens can fulfill themselves as virtuous beings and gain satisfaction through political participation in a just state.

Aristotle on Friendship

Aristotle wrote about more than politics. In *Nicomachean Ethics*, Aristotle was the first philosopher to propose that humans are social animals. He argues that friendship is one of the greatest achievements and the root of a happy life. In *Politics* he carefully distinguishes friendship from justice, saying that true friends have no need of justice. Imagine a lively dinner party with old friends where the host marks a precise measure on each glass and pours the wine exactly to that line, no more, no less. While this might be fair it would seem wildly inappropriate. He suggests that friends don't care about having exactly fair shares with their friends, and generalizes this to talk about civic friendship—an attitude of friendship between citizens.

Linked to *Politics* are Aristotle's ethical writings in both the *Nicomachean Ethics* and *Eudemian Ethics*. These have provided modern thinkers

THE SCHOOL OF ATHENS
This 16th-century fresco by Raphael depicts famous Greek thinkers. In the center Plato points at the heavens (the world of ideas), but Aristotle points toward the earth (the only true reality).

DEMOCRACY OR UTOPIA?

ARISTOTLE OR PLATO?

Although Aristotle owed a great deal to Plato's teachings, he rejected the idealism of his teacher. Plato asserted that only ideas truly existed (things in this world were mere copies), and he believed in an immortal soul. Aristotle, however, saw tangible things and everyday experience as the only true reality. He did not believe in other worlds.

They also differed in their social status and political thought. Plato was from a noble Athenian family, whereas Aristotle was a *métoikos* (a foreigner with no political rights), as he had not been born in Athens. Plato criticized Athenian democracy, and in his *Republic* proposed an ideal state with three classes: the philosophers, who governed it; the warriors, who defended it; and the workers, who produced. In contrast, Aristotle's *Politics* defended moderate democracy as the lesser evil, and strongly criticized utopias. He wrote, "in democracy the citizen is not bound to obey anyone else; or if he does obey, it is on the condition that he in turn commands; hence freedom is reconciled with equality in this system."

with a basis for a fairly new approach to moral philosophy, known as "virtue ethics." Aristotle seems to ask and answer questions about moral character and education, morality and the emotions, and what it is to be a virtuous person; questions that are topical today. Where other approaches to moral thinking ask, What rule should I follow here? or weigh up the consequences of options in a cost-benefit analysis, followers of Aristotle's moral philosophy ask, What would a virtuous person do? Is this act kind and generous, or cowardly and cruel? They examine individual virtues such as courage, charity, and justice and ask how a courageous, charitable, or just person would act in these circumstances.

Because of its focus on the character of the individual as an agent of morality, it might appear that virtue ethics has little to say about public policy, a just society, or political philosophy. But it does. Virtue ethics has informed the debate about an ethos of care, and is taken seriously by theorists of public policy, including feminist theorists. What's more, if the good society is

SCALA, FLORENCE

DAGLI ORTI/ART ARCHIVE

made up of virtuous individuals, then society's schools and laws need to be reformed to teach and develop strong moral characters.

Running through all of Aristotle's work is a passion to investigate reality in order to understand. This challenges the postmodern view of the world as just too complicated to be understood. Aristotle's driving assumption is that if we try really hard we can work out how things fit together and what they are for. He sees this as a collective effort that is both difficult and easy: No one can attain it in a wholly satisfactory way and no one misses it completely. Each of us says something about nature, and although as individuals we advance the subject little, from all of us together something sizable results.

Even if Aristotle would find many aspects of contemporary society utterly unrecognizable, his ethical work is still relevant today, and so is his take on politics. To argue this you need to assert that these ideas can be separated from his advocacy of slavery and the subordination of women—but that is fairly easy to do, as Aristotle's omnivorous approach to knowledge and understanding stops him from developing a tight, formally structured system in which each part depends on every other part. In fact, this is one of the great attractions of Aristotle's thought: He is cautious about the amount of precision we should aim at in our answers. He asks for no more precision than the subject matter has itself. So if the thing under examination is slippery and vague, then our account of it must reflect this, rather than forcing it into a nice, neat system. The result is that while it can take a little while to really get into Aristotle's writing, he is ultimately a lot clearer in his ideas than some modern philosophers. ■

JONATHAN E. PIKE
PIKE'S WORKS COVER THE HISTORY OF PHILOSOPHY, INCLUDING THE INFLUENCE OF ANCIENT GREECE ON MODERN THOUGHT.

A KING'S TEACHER

While at court in Pella (above), the capital of Macedonia, Aristotle taught the young prince Alexander a wide range of subjects and inspired in him a love of the heroic and epic poems of Homer.

Learn more

BOOKS

The Nicomachean Ethics
Aristotle, Penguin, 2004.

From Aristotle to Marx: Aristotelianism in Marxist Social Ontology
Jonathan E. Pike, Ashgate, 1999.

The Lagoon: How Aristotle Invented Science
Armand Marie Leroi, Bloomsbury Circus, 2014.

FASCINATED BY NATURE: THE FIRST BIOLOGIST

DEA/ALBUM

HERCULES HUNTING BIRDS IN A SCENE ON AN ATTIC VASE.

Beyond politics and philosophy, one of Aristotle's many interests was zoology, as can be seen in his lengthy treatise *The History of Animals*. In this context "history" means "research," and that is what this extraordinary work contains. It is the first known research into animal anatomy, reproduction, and behavior and was compiled by Aristotle based on reading, observation, and reports from fishermen and hunters. Some key aspects of his pioneering research are set out on these pages.

1 CETACEANS: THE MAMMALS THAT LIVE IN THE SEA

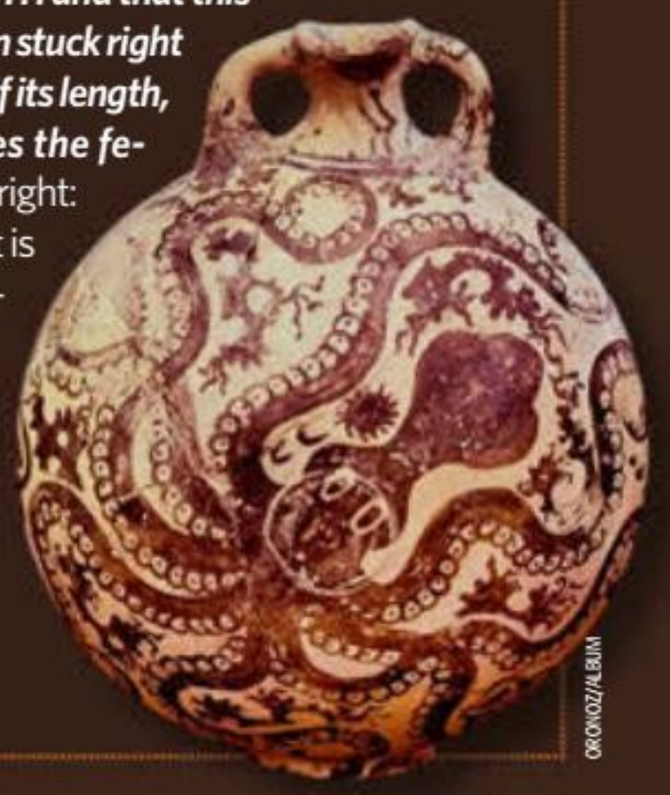
Aristotle was not only the first to consider cetaceans as mammals but he also differentiated between fish with bones and those with cartilage.

At the beginning of *The History of Animals,* Aristotle says that ***"some animals are viviparous, others oviparous, and still others larviparous,"*** terminology still in use today. He explained that viviparous animals include ***"cetaceans, such***

2 THE SURPRISING WAY IN WHICH OCTOPUSES REPRODUCE

Aristotle noted a peculiar feature of cephalopod reproduction that was not rediscovered until more than 2,000 years later, in the 19th century.

After describing how octopuses copulate, ***"they join at the mouth, intertwining tentacle by tentacle,"*** Aristotle added, ***"there are those who say the male has a kind of virile member on one of his tentacles . . . and that this member is a kind of tendon stuck right into the tentacle, up to half its length, with which he penetrates the female's nose."*** And he was right: This member does exist: it is the hectocotylus, a modified tentacle that cephalopods like the octopus use to transfer spermatophores, or sperm packets, into the female.



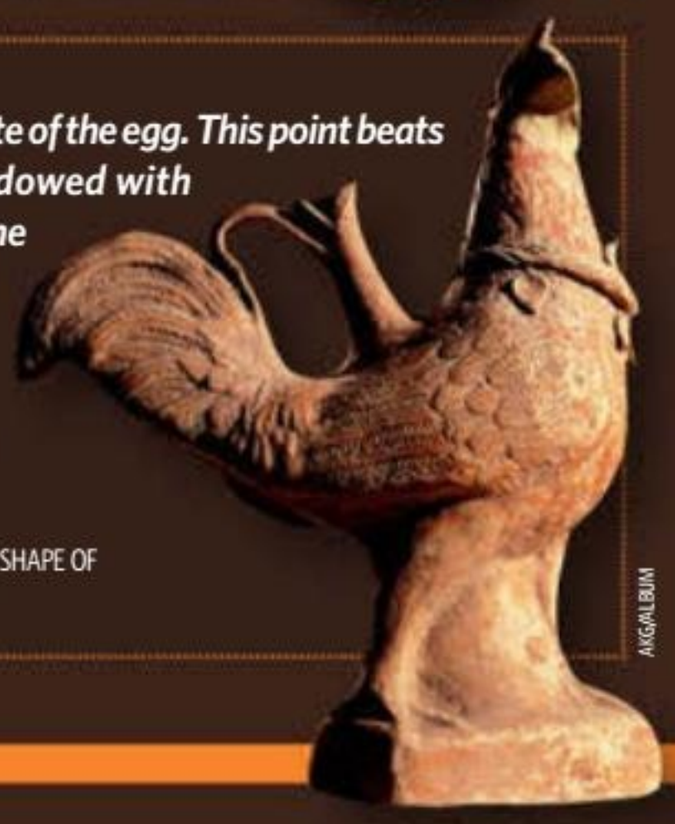
KAMARES CERAMIC POT WITH AN OCTOPUS, CRETE, CIRCA 2000-1700 B.C.

DEA/ALBUM

5 THE CHICKEN'S EGG, OR HOW A LIVING BEING IS FORMED

We are indebted to Aristotle for the first study of embryology, which gives a detailed and systematic description of the development of a chicken embryo .

After careful observation he wrote: ***"With the common hen, after three days and three nights there is the first indication of the embryo: the yolk comes into being, rising toward the sharp end, where . . . the egg gets hatched; and the heart appears, like a speck of blood, in the white of the egg. This point beats and moves as though endowed with life."*** He explained that ***"the life-element of the chick is in the white of the egg, and the nutriment comes through the navel-string out of the yolk."***



CERAMIC *ASKOS* (WINE VESSEL) IN THE SHAPE OF A ROOSTER, FROM APULIA

AKG/ALBUM

as dolphins, and selachians." "Selachian," a term Roman naturalist Pliny the Elder claims was coined by Aristotle for cartilaginous fish (such as sharks and rays) is another that biologists continue to use. Aristotle also observed, ***"Whatever animals have milk, have it in their breasts. All animals have breasts that are internally and externally viviparous, for instance all animals that have hair, such as humans and horses; and cetaceans, such as dolphins, porpoises, and whales; all these animals have breasts and are supplied with milk."*** He said that cetaceans ***"produce an embryo that forms the animal as it is articulated, as in the case of humans and viviparous quadrupeds."***

DOLPHINS IN A FRESCO, PALACE OF KNOSSOS, CRETE. RECONSTRUCTION BY PIET DE JONG, 1922-1930

BRIDGEMAN/ACI

3 A UNIQUE TECHNIQUE FOR STUDYING THE VENOUS SYSTEM

Aristotle's pioneering observations of the vascular system owe a great deal to the innovative if peculiar method he used to study blood vessels.

Aristotle found that the main difficulty in observing blood vessels was that they collapse when emptied, such as when a knife was used to kill an animal. However, he noticed that ***"those who observe human bodies reduced to extreme thinness have been able to determine the origin of the veins by their external appearance in that state."*** This led Aristotle to carry out external observation of animals, then make them lose weight, and finally strangle them. This procedure left the veins fully visible.

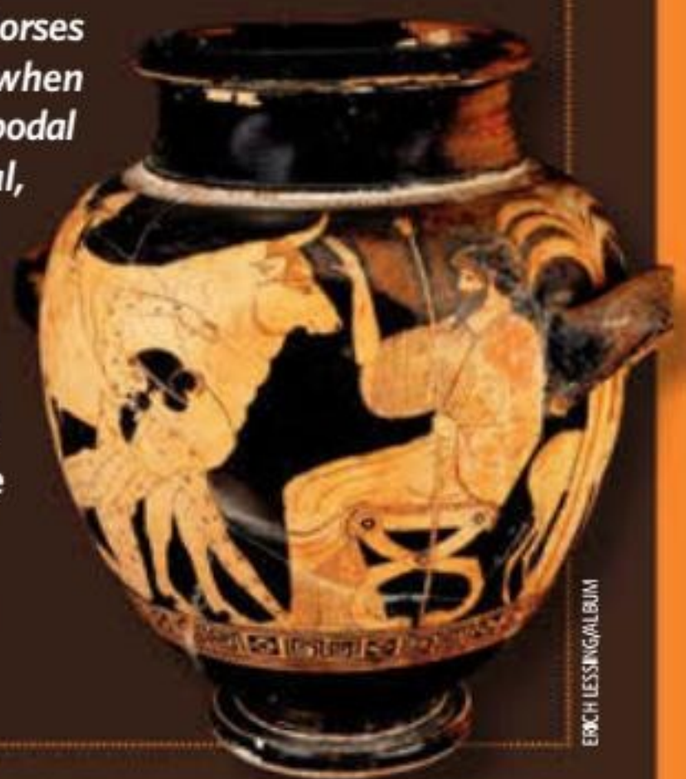
PORTRAIT OF A HORSE ON A KYLIX, A CUP FOR DRINKING WINE

AKG/ALBUM

4 THE GREAT ZOOLOGICAL DIVIDE: VERTEBRATES AND INVERTEBRATES

Of Aristotle's many important observations one is particularly noteworthy: the division of animals into vertebrates and invertebrates.

Aristotle's distinction between red-blooded animals *(enaima)* and non-red-blooded animals *(anaima)* almost matches the division between vertebrates and invertebrates: ***"Animals are divided into those with blood, such as humans, horses and all animals, which when fully developed may be apodal (having no feet), bipedal, or quadrupedal, and those without blood, such as bees, wasps, and, among sea animals, cuttlefish, lobsters, and all animals that have more than four feet."***



ZEUS AND IO THE COW ON A FIFTH-CENTURY B.C. CERAMIC POT

ERICH LESSING/ALBUM

6 BEES: THE SOCIAL ORGANIZATION OF AN INSECT

Although Aristotle thought that honey was "a substance that falls out of the air" when the stars come out and rainbows rise, he wrote an excellent study of bees.

Aristotle described the life cycle of these insects: ***"Whenever the bee lays an egg in the comb, there is always a drop of honey set against it. The larva of the bee gets feet and wings as soon as the cell has been stopped up with wax, and when it arrives at its completed form, it breaks its membrane and flies away."*** Among many other things, he said that these insects have a ***"social instinct"*** as they work ***"toward a common purpose, like humans or ants."*** This led Aristotle to the conclusion that ***"bees expel the lazy and the wasteful."***

SILVER TETRADRACHM WITH A BEE ON THE REVERSE, COINED IN EPHESUS IN THE FOURTH CENTURY B.C.

ERICH LESSING/ALBUM

In this relief on Ara Pacis Augustae, in Rome, Tellus, the earth goddess, holds Romulus and Remus in an allegory of the famous legend. The coin (opposite) shows Romulus's successor, Numa Pompilius. He was a pious man who encouraged his new Roman citizens to worship the gods.

AKG

THE FOUNDING OF ROME

A great empire demands a great capital, and a great capital merits a great founder. Rome is a city so steeped in lore and legend that it's hard to tell where reality ends and the myth begins.

Livy, the Roman historian, wrote that "Rome has grown since its humble beginnings, that it is now overwhelmed by its own greatness." He was writing in the first century A.D., the golden age of the Emperor Augustus, who famously transformed the city from brick to marble, creating many of the architectural wonders tourists continue to admire today. But according to legend the great capital of the mighty Roman Empire was founded some 700 years earlier. Its modest origins were tangible to Livy in the form of a wooden hut preserved and celebrated as the home where the city's founder had once lived. But the greatness of Rome was reflected in the city's founding legend, an epic story of intrigue, betrayal, and murder. In the mindset of ancient Romans the creation of a great city was a decisive act, the decision of an identifiable founder. For Romans there was no room for doubt: a hero had to be involved. And that hero was called Romulus.

DEA/ALBUM

THE FAMOUS FORUM

This was the civic and political center of ancient Rome. Located at the foot of Palatine Hill, one of Rome's seven hills, it was here that Romulus decided to found the city that became the heart of one of history's greatest empires.

According to the most popular version of the legend, the story of Romulus and Remus begins with their grandfather, Numitor, King of Alba Longa, a city in Latium, in central Italy. Numitor was deposed by his brother Amulius, who decided to avoid future complications by getting rid of his brother's offspring. Amulius ordered Numitor's sons be put to death and his daughter to become a vestal virgin. As the name suggests, sexual purity was central to this female priesthood, and celibacy was enforced on pain of death. This was supposed to prevent the priestesses from having children, but things worked out differently for Rhea Silvia. One day while fulfilling her priestly duties, Rhea Silvia went to fetch water from a spring. There she fell asleep and was deflowered and impregnated by Mars, the Roman god of war. Rhea Silvia gave birth to twin boys, and her uncle Amulius, paranoid about the threat from potential claimants to his usurped throne, ordered the brothers to be drowned in the Tiber River. However, the servants he charged with this ghastly deed took pity on the boys and set them adrift in a basket, which floated down the river and washed up at the foot of what is now known as Palatine Hill. In a cave within the Palatine, a she-wolf heard their cries of hunger and suckled the babies, ensuring their survival. Shortly afterward a group of shepherds appeared; the one called Faustulus

BUILDING A GREAT CITY

1000 B.C.

The first evidence of human settlement appears on the site of what would become the city of Rome: tombs next to the future location of the Arch of Augustus in the Roman Forum.

753 B.C.

Varro (a first-century B.C. historian) dated the founding of Rome by Romulus at 753 B.C. We know that around this time a settlement covered its main hills and areas in between.

600 B.C.

Rome becomes a proper city in the times of Tarquinius Priscus, its fifth king, who originally came from the Etruscan city of Tarquinia. He takes over land and significantly boosts the city's development.

MAURIZIO RELLINI/FOTOTECA 9X12

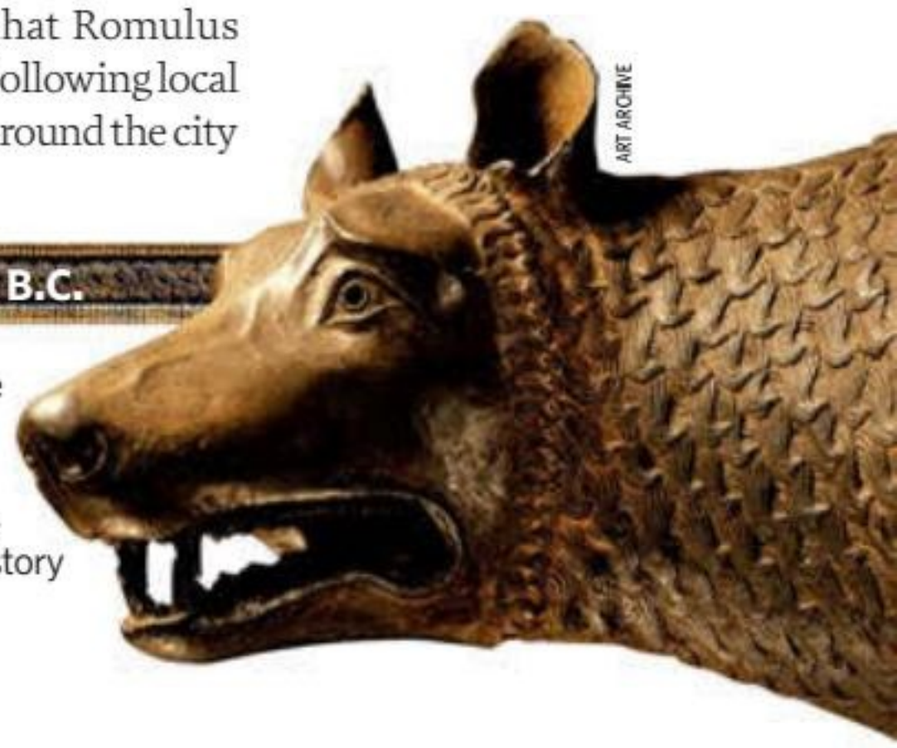
took the twins home to his wife, who brought them up as her own.

The Bloody Founding of Rome

Romulus and Remus spent their childhood living in the wild among the local shepherds. Their natural leadership skills soon came to the fore, and they formed a gang of youths who fought against cattle rustlers. When Faustulus finally told the twins the truth about their royal heritage, the brothers overthrew the tyrant Amulius and restored their grandfather, Numitor, to his throne. They now felt that the time had come for them to build their own city and selected the site where the she-wolf had found and fed them when they were babies. However, when they arrived with their followers, the brothers disagreed on which of them should be the founder. They decided that the gods should settle the dispute: The brother who received the most powerful omen would be the one to found the city. Romulus climbed to the top of Palatine Hill while Remus stood atop Aventine Hill. There Remus saw six vultures, birds that were considered highly auspicious at the time. But then Romulus caught sight of twice as many and claimed that the gods had decided in his favor. So it was that Romulus came to be the founder of Rome. Following local rituals Romulus plowed a furrow around the city

THE CAPITOLINE SHE-WOLF

The statue (below) is exhibited in the Capitoline Museum, precisely where legend claims that the she-wolf fed Romulus and Remus, saving the twins from certain death in the wilderness.



ART ARCHIVE

420 B.C.

The Greek historian Hellanicus of Lesbos makes the first mention of the role played in Rome's founding by the Trojan hero Aeneas, who accompanied Odysseus (Ulysses) on his journeys and adventures.

330-310 B.C.

A mirror, found in a tomb in Bolsena, near Rome, is possibly the first known artifact showing the twins and she-wolf. A statue of the she-wolf suckling the babies is erected in the Forum in 296 B.C.

circa 210 B.C.

Fabius Pictor writes the first history of Rome. His telling of the tale of Romulus and Remus forms the basis of the story retold over centuries.

THE RAPE OF THE SABINE WOMEN IS DEPICTED IN AN OIL PAINTING BY NICOLAS POUSSIN IN 1638.

SCALA

SONS OF A SLAVE

AN ALTERNATIVE ROMULUS & REMUS

In his *Life of Romulus* Plutarch offers a different version of the twins' origins: "Tarchetius, King of the Albans, who was most lawless and cruel, was visited with a strange phantom in his house, a phallus rising out of the hearth . . . an oracle of Tethys in Etruria informed Tarchetius that a virgin must have intercourse with this phantom; she would thus bear a son most illustrious for his valor, good fortune, and strength. Tarchetius told the prophecy to one of his daughters and bade her consort with the phantom; but she disdained to do so, and sent a slave in her stead. When Tarchetius learned of the trickery, he was angered and condemned them both to death. But Vesta appeared to him in his dreams and forbade him to kill them. He then ordered that the maidens weave in their prison, promising them that when they had finished the weaving they would be given in marriage. But what they weaved by day Tarchetius ordered other women to unravel by night. When the slave gave birth to twins, Tarchetius gave them to a certain Teratius with orders to kill them."

THE FIRST HOUSES

Archaeological evidence suggests that there was a settlement on the Palatine Hill from around the ninth century B.C. It had huts similar to this one (below) crafted as an early Roman funerary urn.

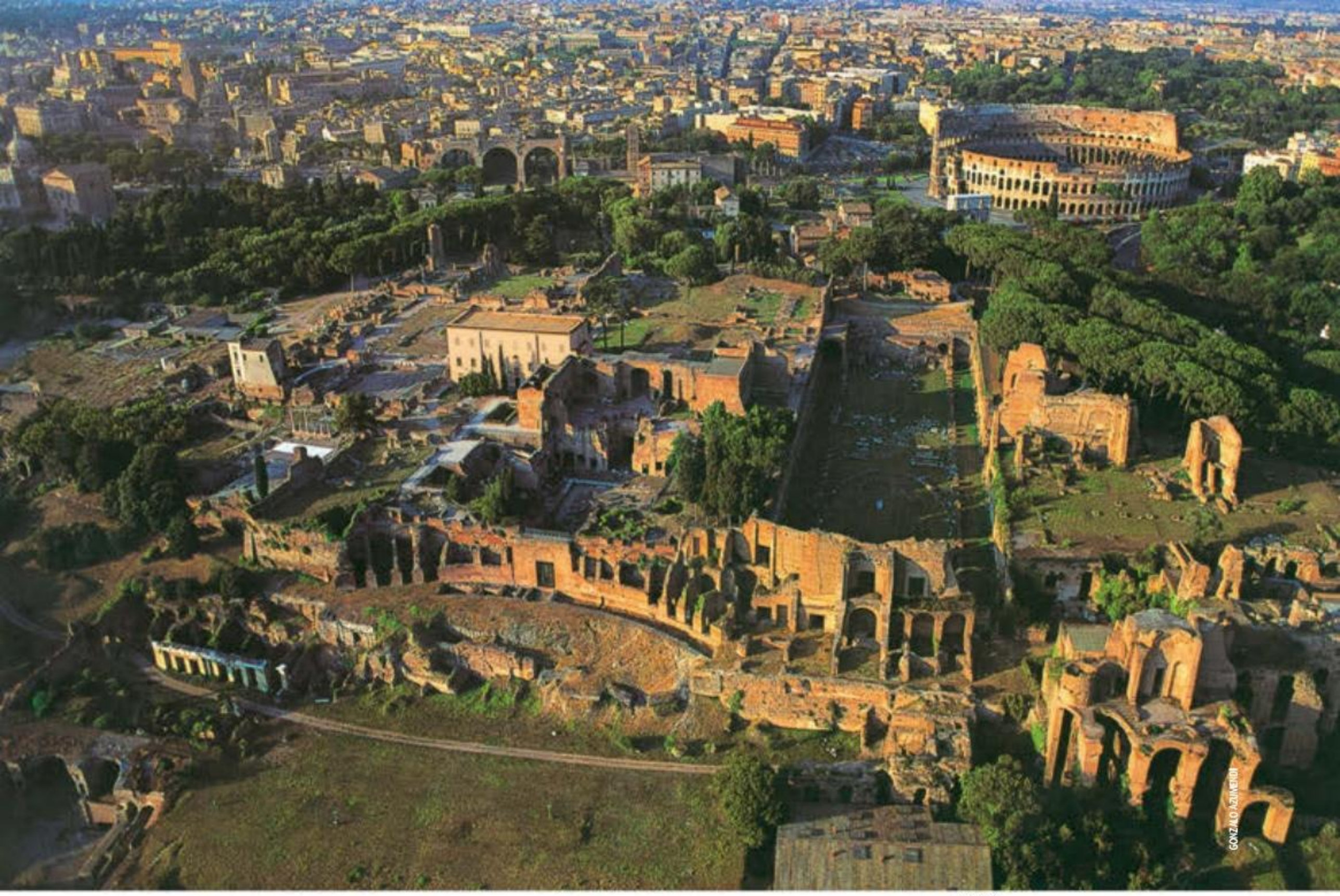
DEA/ALBUM

to set its boundaries. He then issued a decree saying that nobody was allowed to cross the city's perimeter bearing arms. Remus, however, unhappy with Romulus's leadership, mocked his brother by leaping over the city wall. In the ensuing fight Remus was killed by his brother.

But the legend of Rome's foundation does not end with this dramatic fratricide. The new city needed citizens, so Romulus created a place of asylum near Capitoline Hill. This drew many people to Rome, even though most of them were fugitives and exiles. Yet one key ingredient was still lacking: women. Romulus came up with an unorthodox solution. He invited a neighboring tribe, the Sabines, to a festival, during which the guests' wives and daughters were abducted and later forced to accept Roman husbands. Even though war seemed inevitable the Sabines and the Romans managed to reach an agreement. Romulus is said to have reigned for about 40 years, and two contrasting versions of his death are offered. The oldest has Romulus disappearing during a storm and being taken directly to the heavens, where he became the god Quirinus. The second, less flattering version has Romulus murdered and his body quartered by the senators, who had grown tired of his tyrannical rule. Thus goes the legend, though the historic reality of Rome's founding is likely to be somewhat different.

The Roots of Rome's Legend

Except for those that started as colonies, very few cities in the ancient world were deliberately founded; instead of a tangible moment of creation, they were rather the result of a long process of formation. The same is probably true of Rome. In fact, due to the number, complexity, and often conflicting accounts of the documents we have on the subject, Rome's origins are among the toughest to study and are still hotly debated by historians. According to archaeologists, Rome's original settlement dates to the tenth century B.C. The story of its foundation, on the other hand, arose about 600 years later, in the fourth century B.C., casting immediate doubt on whether anything in the Romulus and Remus



WHITE STAR

tale can be viewed as historical. What's more, there are different versions of the myth, each molded to suit the particular needs of Rome's ever shifting political landscape. Sifting fact from fiction seems almost impossible.

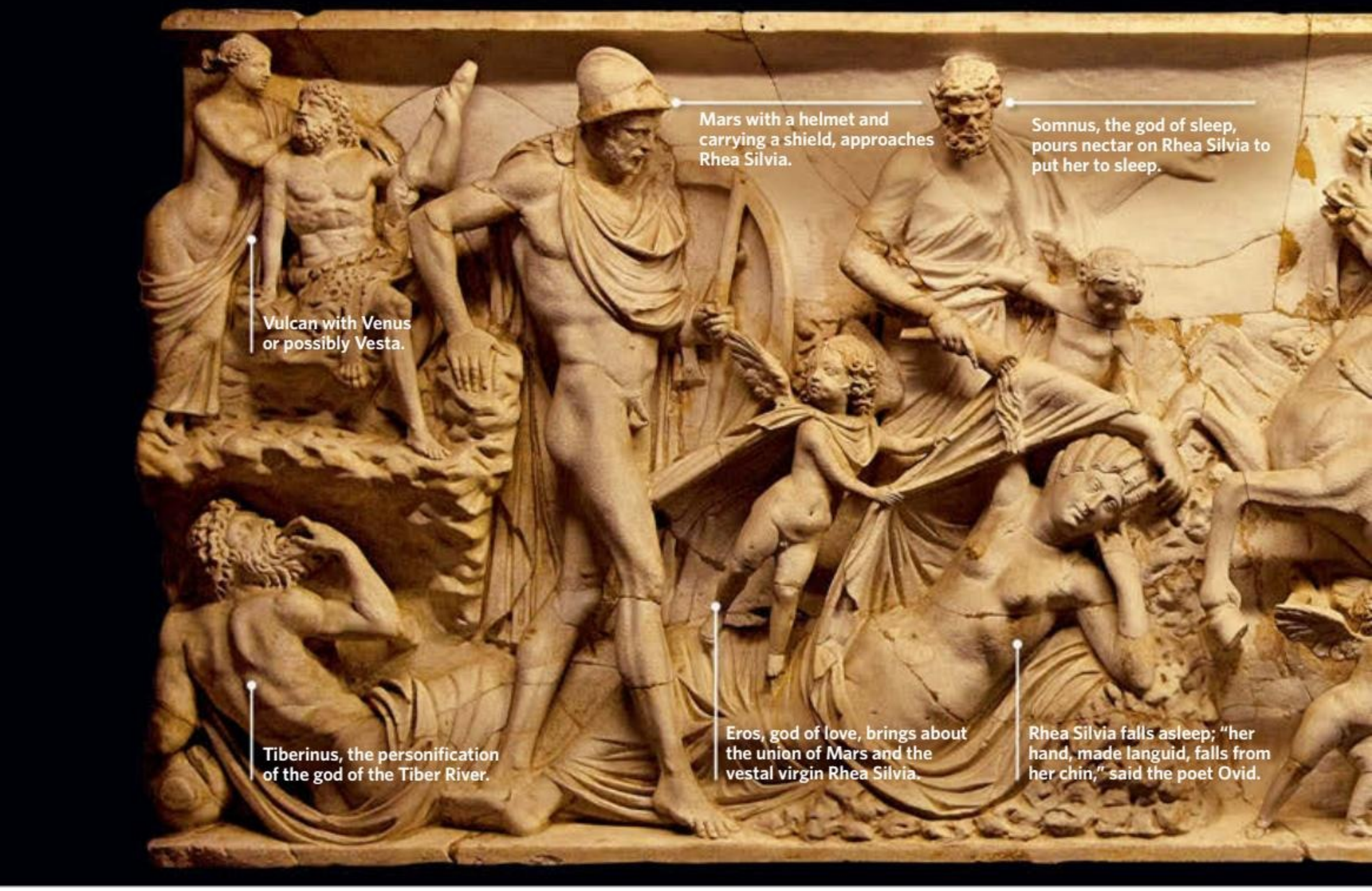
However, specialists think that the myth of Romulus and Remus may contain a very ancient core that shines a light on some of the earliest beliefs of the region's original inhabitants. Part of the story, specifically up to the founding of Rome, has direct parallels with traditional accounts of how other cities in the region were said to have been founded. Experts have carefully compared the Romulus and Remus legend with these myths and other local lore to identify the elements that are shared and that might belong to an ancient core.

The cities of Praeneste (present-day Palestrina) and Cures (in what is now Fara in Sabina) both have foundation myths recognizably similar to the legend of Romulus and Remus, and both are barely 30 miles from Rome. Praeneste was said to have been founded by Caeculus, who was the son of the Roman god Vulcan. He was abandoned at birth and then rescued, in his case by two maids fetching water from a spring. Caeculus grew up among shepherds and became a great fighter—albeit a brigand. He founded the city following a divine wonder performed by Vulcan, who sent a bright flame to demonstrate to a crowd that Caeculus was indeed his son. Cures was believed to have been established by a hero called Modius Fabidius, who was the progeny of a union between Mars and a local maid. Fabidius, like the twins and Caeculus, spent his youth fighting and is portrayed as the leader of a band of young men who accompany him when he founds the city.

In each story the heroes can claim divine parentage: Mars for the twins and Fabidius, Vulcan for Caeculus. The image of Rhea Silvia as a vestal virgin has parallels in myths popular in that region of Italy, and the motif of a royal child abandoned to nature and fed by a wild animal is common in ancient Mediterranean mythology. In the case of Romulus and Remus, the she-wolf replaces the mother of the children at a time when they are most vulnerable. Known

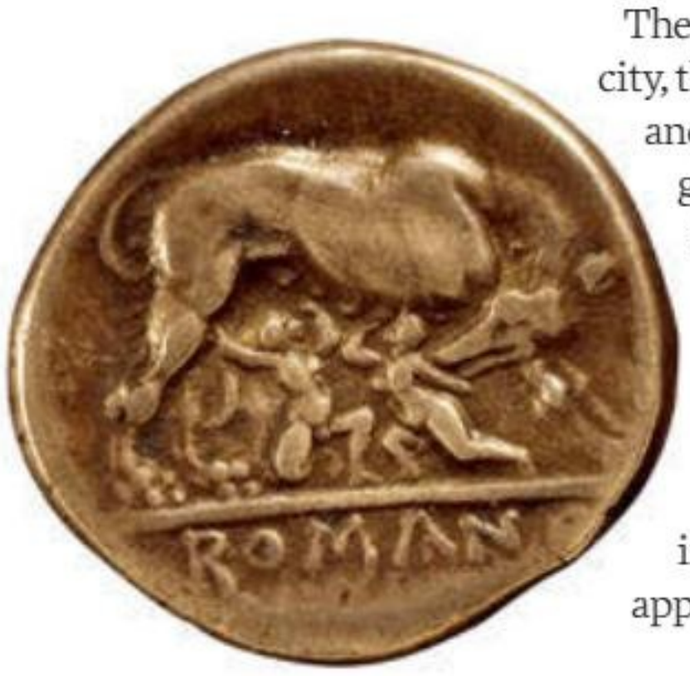
ROMULUS'S PALATINE HILL

Extensive excavation of this archaeological site has revealed discoveries ranging from prehistoric remains to imperial palaces. It is the fabled location of the Lupercal, the cave of the she-wolf revered for her care of Romulus and Remus.


Vulcan with Venus or possibly Vesta.
Mars with a helmet and carrying a shield, approaches Rhea Silvia.
Somnus, the god of sleep, pours nectar on Rhea Silvia to put her to sleep.
Tiberinus, the personification of the god of the Tiber River.
Eros, god of love, brings about the union of Mars and the vestal virgin Rhea Silvia.
Rhea Silvia falls asleep; "her hand, made languid, falls from her chin," said the poet Ovid.

A MINTED LEGEND

The story of Romulus and Remus was ever-present throughout the history of Rome and its empire, often appearing in decorative reliefs and on coins, such as this one from the third century B.C. showing the suckling she-wolf.



DEA/ALBUM

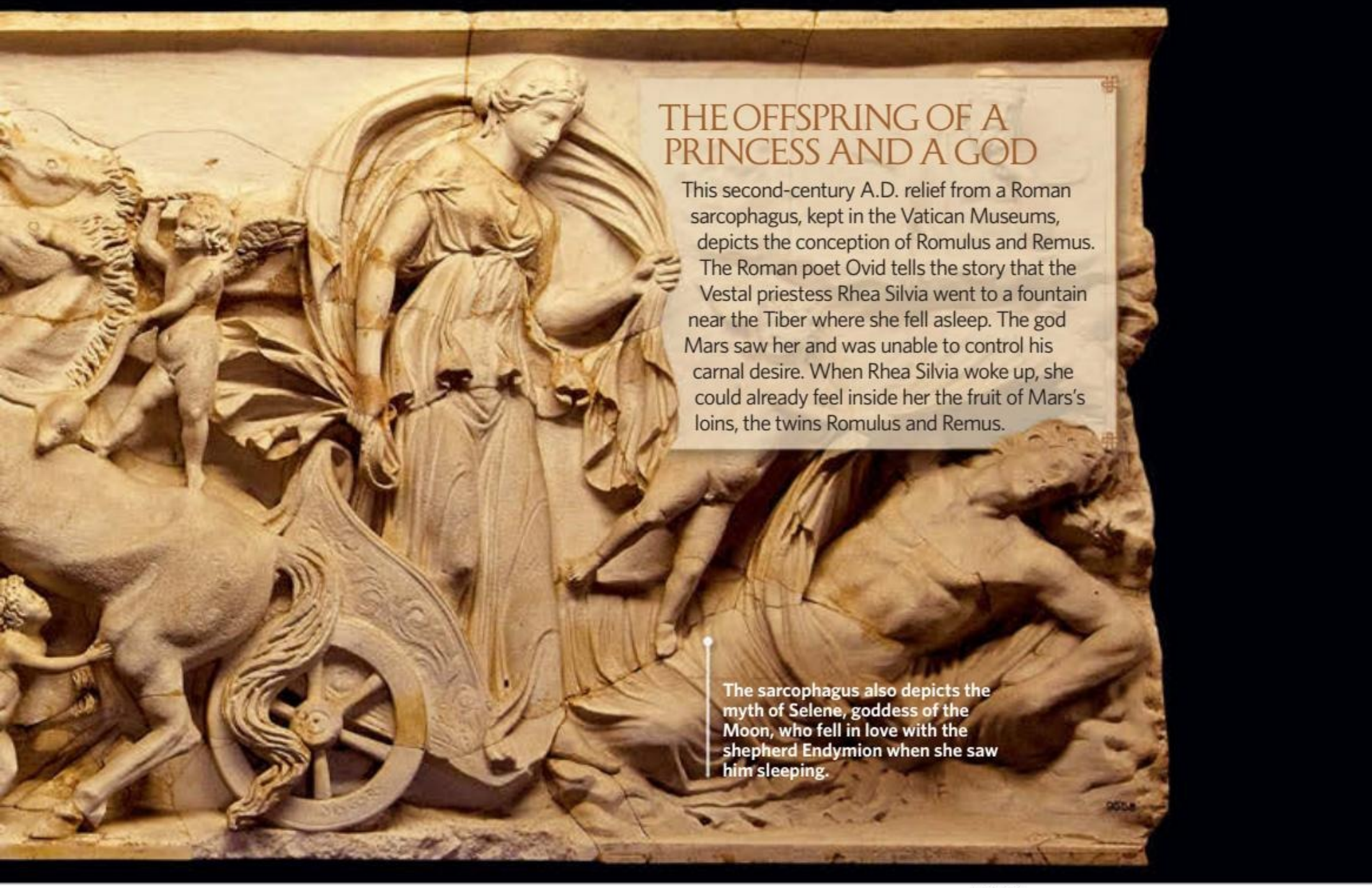
portrayals of the she-wolf show the animal displaying a maternal rather than an aggressive attitude, turning her head toward the boys as she feeds them. The animal's appearance is itself providential, as if she had been sent by the gods. Indeed Mars was believed to have considered wolves to be sacred animals. Latin heroes were frequently linked with creative fire, mainly represented in Roman religion by Vesta, the goddess of the hearth, at whose temple the twins' mother was a priestess, and by Vulcan the Roman god of fire.

The twins being raised in the wild, far from the city, the classical symbol of civilization, echoes ancient initiation rites practiced in the region, marking the passage of young men into adulthood. The Lucanos, a people living in the highlands of southern Italy, would send their boys out into the wilderness for a time during which they would learn the values that allowed them to return to the community as men. It is in this context that Romulus and Remus appear as leaders of a group often portrayed as protecting cattle from being stolen. This is probably a positive spin, as the gang was more likely to have been the cattle rustlers. Caeculus and Fabidius are presented in a similar way and in an equally positive light.

A City Needs Its Hero

The story that Romulus and Remus founded Rome seems to have been well established by the fourth century B.C. This was a time when the prosperous Greek colonies in southern Italy (called Magna Graecia) had forged close relationships with the Latin peoples farther north, including the Romans, and their influence is also apparent. The Greeks believed that all cities must have a founder and suggested stories to explain how Rome came into being. The first and best known was centered on Aeneas, a hero of the Trojan War. According to Virgil's epic poem the *Aeneid*, he escaped to the Italian peninsula after his city was destroyed.

The Romans accepted the principle of the founding hero but adapted it to their needs. They were happy to claim descent from the Greeks



THE OFFSPRING OF A PRINCESS AND A GOD

This second-century A.D. relief from a Roman sarcophagus, kept in the Vatican Museums, depicts the conception of Romulus and Remus. The Roman poet Ovid tells the story that the Vestal priestess Rhea Silvia went to a fountain near the Tiber where she fell asleep. The god Mars saw her and was unable to control his carnal desire. When Rhea Silvia woke up, she could already feel inside her the fruit of Mars's loins, the twins Romulus and Remus.

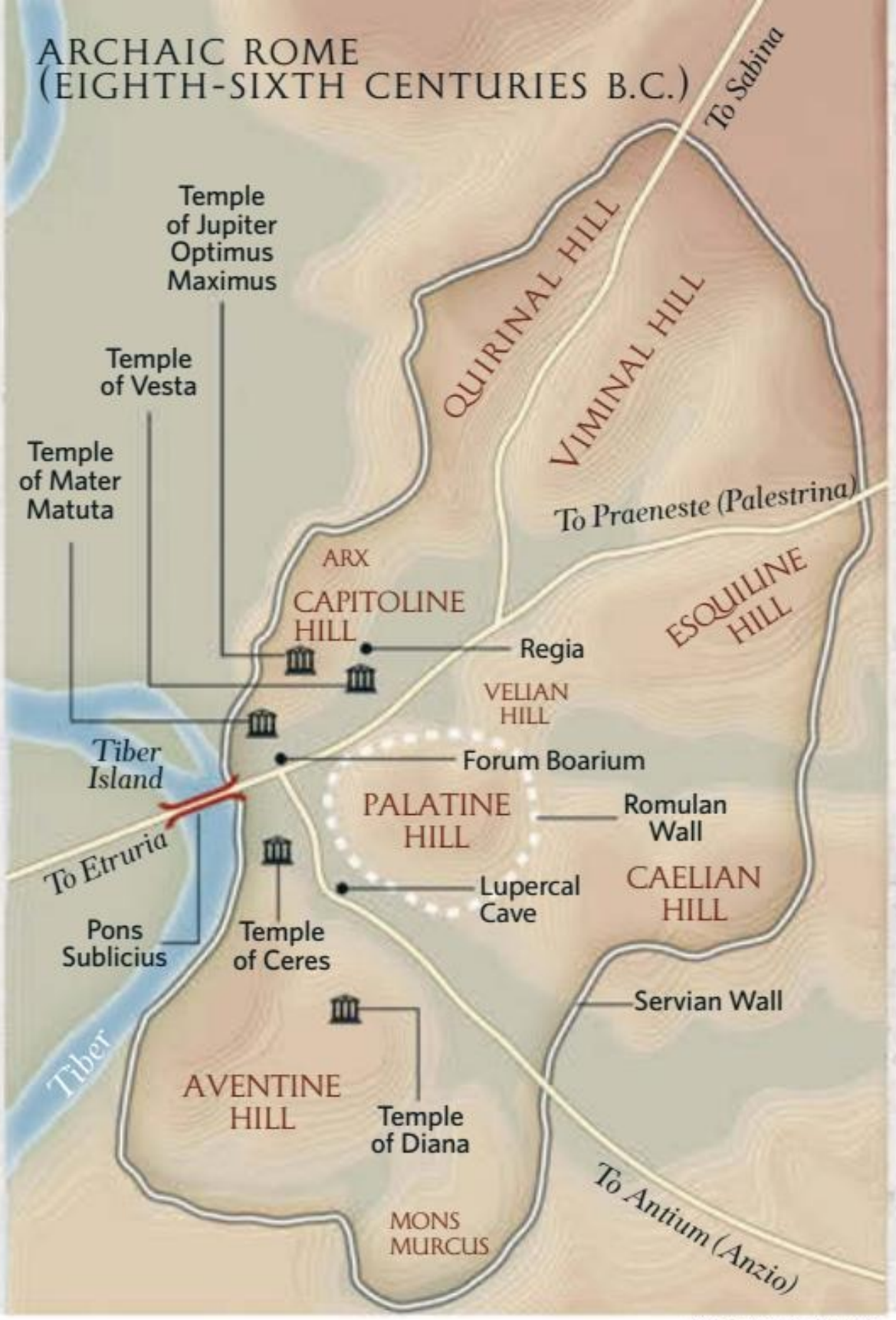
The sarcophagus also depicts the myth of Selene, goddess of the Moon, who fell in love with the shepherd Endymion when she saw him sleeping.

WHITE STAR

in the distant past, as this gave them a stamp of nobility and prestige that was useful on the Mediterranean scene. So the Romans adapted the Greek tradition about the arrival of Aeneas in Italy: instead of Rome's founder, the Trojan hero became the father of all the Latin peoples. The Romans gave the honor of founding Rome to one of their own, Romulus. And it became important that the city have only one clearly identifiable founder, so Remus had to die. Romulus was portrayed as a wise and just king, and his violent reaction against Remus's mockery was justified as an exemplary punishment for his crime. At the time the original tale emerged, the Romans took pride in practicing such strict discipline. Putting law before family was held up as honoring the virtues of their ancestors. There are many recorded instances of Roman magistrates punishing their sons with the maximum sentence when they had broken the law.

The legend also establishes Romulus as the king who created the three pillars of the Roman political structure that were fundamental to the idea of cities and citizenship: royalty, the senate, and the people. The latter was divided into *curiae* and *tribes* for political and military purposes. The social structure of the senate was also attributed to Romulus, who chose the hundred most distinguished individuals from noble clans to become its first senators. Their families became the oldest of the patricians, Rome's elite ruling class, who held sway over the rest of the population—the plebs. The codifying of public religion, considered another essential element in forming a city, was attributed to Romulus's successor, Numa Pompilius.

By the second half of the fourth century B.C. the full legend of Romulus and Remus founding Rome was firmly established. It's from this time that we find the first mentions of Romulus in literary sources (a fragment of text by the Sicilian historian Alcimus) and in the archaeological record (a picture of the she-wolf and twins on a mirror found in Bolsena). According to Livy, sculptures in the twins' honor were erected in the Roman Forum in 296 B.C.: "That same year, the aediles Cnaeus and Quintus Ogulnius tried some usurers. After confiscating their property,



PAOLO CORDELLI/AGE FOTOSTOCK

THE CITY OF SEVEN HILLS

FROM VILLAGE TO CAPITAL CITY

Modern archaeological discoveries have shown that the legend of Romulus and Remus may have some basis in fact. Tradition pinpoints Rome's founding as 753 B.C., a date that closely coincides with the area's first known human settlement. A primitive cemetery from the tenth century B.C. found beneath the Roman Forum is the early city's focal point. And the foundations of huts from the eighth century B.C. have been found on the Palatine Hill. They are similar to "Romulus's hut," which was preserved as a relic into the first century A.D. In the seventh century B.C. the residential area was moved to the Forum, so the cemetery was moved to the Esquiline Hill. However, the city proper only emerged around the early sixth century B.C., when the huts were replaced by stone buildings. Tradition attributes this work to King Tarquinius Priscus. Later, his successor, Servius Tullius, built a wall around the city. The Forum, between the Capitoline and Palatine Hills, was the city's center, where the Senate; Regia, or royal palace; and Temple of Vesta were located.

THE WARRING SAMNITES

The Samnites (warrior helmet, below) were a central Italian people who fought against the growing power of their Roman neighbors until finally subjugated in 290 B.C.

they used the proceeds from the fines to . . . erect a statue, beside the Ficus Ruminalis, representing the city's child-founders being suckled by the she-wolf."

From Wolf to Prostitute

Over the following centuries the story of Romulus and Remus was manipulated further, often to meet the needs of politicians embroiled in Rome's political battles. At the end of the second century and during the first century B.C., the Roman Republic was plunged into a crisis that saw famous leaders such as Marius and Sulla, and Julius Caesar and Pompey, fighting a bitter civil war. It was a time when Romans harkened back to the great personalities of the past as a model for political action. Those who aspired to personal power identified themselves with Romulus to justify their proposed refounding of Rome. Their political adversaries did not hesitate to denigrate Romulus as an act of opposition.

Though people generally believed that the epic tale of Rome's origins was true, some started to doubt certain details, such as the twins being fathered by Mars or the she-wolf taking care of them. New, more realistic versions of the legend emerged, stating that it was Amulius, not Mars, who had raped Rhea Silvia. The same went for the she-wolf. Livy denied her existence as an animal, saying that the twins' adoptive mother "had prostituted her body and was called a 'she-wolf'" by the shepherds. These later versions of the myth sometimes stressed that other people, not Romulus, were responsible for Remus's death. His murder was portrayed as a kind of "original sin" that had forever stained Rome's history. The poet Horace lamented that "bitter doom pursues the Romans: a crime, a murdered brother, once Remus's guiltless blood flowed

DEA/ALBUM

> "I found Rome built of bricks; I leave her clothed in marble."
>
> **EMPEROR AUGUSTUS,** IN SUETONIUS'S *LIVES OF THE CAESARS*

PAOLO CORDELLI/AGE FOTOSTOCK

on the ground, a curse upon his children." This vision sprang from the suffering brought by the civil wars that devastated the Roman world during Horace's lifetime.

Did Romulus Really Exist?

An exciting new element has entered the debate in recent years, evidence that could provide a historic basis for Rome's mythical founder. Italian archaeologist Andrea Carandini has discovered a stone wall with a gate that dates back to the late eighth century B.C.—and it's on the side of Palatine Hill. There is an immediate temptation to identify the wall as the one that Romulus allegedly built on the Palatine when he founded the city in 753 B.C. Indeed, some archaeologists and historians have vehemently asserted that the wall is the one of legend.

However, caution is clearly required. One cannot deny the find is extraordinary and of great importance for studying the origins of Rome, but it is quite a leap of faith to identify it as Romulus's work. The gate found by Carandini is probably the Mugonia Gate, a site mentioned by later ancient writers as being part of Romulus's wall. The find also confirms the central role of Palatine Hill in the history of early Rome. Yet, although Carandini's find does not prove Romulus's existence, it does provide tantalizing evidence of a construction at a time and a place associated with him, so it is, perhaps, a first step toward acknowledging the historical existence of this mythical figure. ■

JORGE MARTÍNEZ-PINNA
PINNA HAS WRITTEN AND TAUGHT EXTENSIVELY ON THE ORIGINS OF ROME AND OTHER ANCIENT MEDITERRANEAN CULTURES.

THE GREAT TIBER RIVER

The Tiber River, figuring in the myth of Romulus and Remus, offered significant strategic advantages and was a decisive factor in selecting Rome's location. The Milvian Bridge (above), built in 206 B.C., is still used as a crossing.

Learn more

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Questar, 2006.

THE CONQUEST OF JERUSALEM

Christian crusaders captured Jerusalem in 1099, a momentous event as depicted in this 15th-century painting. Crusader states or kingdoms were then established to settle and defend the Holy Land.

SCALA, FIRENZE

THE KNIGHTS TEMPLAR

SWORDS IN THE HOLY LAND

For 200 years Christians and Muslims were locked in a bitter struggle for control of the holy city of Jerusalem. The epic story of the Crusades is inextricably linked to that of the Knights Templar, who swore to defend Christianity or die.

The First Crusade of 1096–1099 brought most of present-day Israel, Lebanon, and Syria under the control of a network of Christian crusader states. But it didn't make the Holy Land safe. Pilgrims traveling to Jerusalem were regularly attacked, robbed, and killed by Muslim raiders. In 1120 a handful of knights vowed to use their arms to protect pilgrims. They based themselves in what they believed was the legendary Temple of Solomon, and named their military order after it.

The full name of the new order was "The Poor Knights of Christ and the Temple of Solomon." It was a name befitting their humble origins: They relied on donations to survive. Their fortunes began to change in 1125, when Count Hugh of Champagne joined the order. Hugh was a great French noblemen and landowner, and he opened the doors and purses of Europe to the Templars. In 1129 a religious council held at Troyes, France, formally established the order, which that same year finally saw its first military action when they joined an attack on the city of Damascus. It was a resounding failure.

Despite this inauspicious baptism of fire, the Templars quickly grew in popularity and became the most important military order in Christendom. They served under the direct authority of the church, as expressed by Innocent II in 1139: "We charge you and your sergeants to intrepidly fight the enemies of the Cross; and as a reward we will allow you to retain all the spoils from the Saracens, with no one else having any right to demand a portion. We declare that your house, with all your possessions acquired through the generosity of the princes or any other just means, shall remain under the guardianship and protection of the Holy See."

By the mid-12th century the Templars were skilled combatants fighting in the Second Crusade (1147–1149). In fact, King Louis VII of France entrusted them with training his crusader army. They had become a powerful presence in the Holy Land, able to build mighty fortresses thanks to donations from European patrons. At that time about 300 Knights Templar lived at their Jerusalem headquarters, along with roughly one thousand sergeant brothers, the second rank of the order, and several thousand squires, servants, and auxiliary troops. Led by a grand master, they were the largest and best organized combat force in the Kingdom of Jerusalem. Or at least that was what they arrogantly believed. In 1153, during the Siege of Ashkelon, 40 Templars stormed through a breach in the city wall. Driven by pride, they were determined that the glory of victory should be for the Templars alone and prevented other crusaders from joining the attack. All 40 were killed.

Saladin Ups the Stakes

The Templar's bravery—and their pride—led to the loss of many lives. A standing order forbidding the Templars from retreating unless directed by their commander was the death knell for 300 knights in the Battle of Banias (1158) and 60 more in a skirmish in Harim (1165). Despite such noble failures, their military reputation was maintained through great victories such as La Bocquée (1163), against the army of Nur al Din, the powerful lord of the city of Aleppo. But the fortunes of the Templars suffered a severe blow when the region's Muslim forces came under a new commander: Saladin. His determined aim was to drive the Christians into the sea, and he began by attacking Palestine. The king of Jerusalem, Baldwin IV the Leper, asked the Templars for help. They confronted Saladin in Montgisard and defeated him. This piqued Saladin's pride, and in 1179 he triumphed over the Christians at the battle of Jacob's Ford, and then captured the Templar castle of Beaufort, taking 80 knights

SYLVAIN SONNET/GTRES

RICHARD THE LIONHEART

The crusader king of England had an epic rivalry with the great Muslim leader Saladin. This 12th-century seal shows Richard on his throne, though he was rarely in England.

SOLOMON'S TEMPLE

The Al Aqsa Mosque, shown here, was a holy site for Islam. Crusaders thought it was also the legendary Temple of Solomon and Christianized the mosque as their headquarters.

GEORG GERSTER/AGE FOTOSTOCK

THE CAPTURE OF ST. JOHN D'ACRE IN 1191 THIS CITY, LATER CALLED ACRE, SURRENDERED TO FRANCE'S PHILIP AUGUSTUS AND ENGLAND'S RICHARD THE LIONHEART. IT WAS A CRUCIAL PORT AND WOULD REMAIN IN EUROPEAN HANDS FOR A HUNDRED YEARS.

GÉRARD BLOT/RMN-GRAND PALAIS (CHÂTEAU DE VERSAILLES)

MAP: EOSGIS

COAT OF ARMS OF THE HOUSE OF LUSIGNAN

The House of Lusignan, originally from western France, provided a great many crusaders. It also provided the Kingdom of Jerusalem with its royal connections.

B. RIEGER/GTRES

captive. As the Templars did not allow ransoms to be paid for their brothers captured in battle, Saladin had them all executed except the grand master, who languished in prison until his death.

The Templars realized that they couldn't stop Saladin on their own, so they called for a new crusade. In early 1187 the Templars were led by Gérard de Ridefort, a rash, belligerent, and unscrupulous man. Ridefort ordered an attack on Muslim forces near Nazareth, with barely 200 knights taking on some 7,000 Muslims. The Templar's assault, irresponsible and without strategy, was tantamount to suicide. Only Ridefort and two of his guards managed to escape death; the tragedy drove Ridefort mad.

Saladin advanced farther into Christian-held lands, crossing the River Jordan, where he stopped and waited for the Christian army. The tactical situation was in the Muslims' favor, but the Templar's grand master was keen to engage the enemy and avenge the defeat at Nazareth. So, beneath a blazing sun, the Christians marched across the arid landscape and into a carefully prepared trap, at a spot dominated by two hills called the Horns of Hattin. Here Guy de Lusignan, King of Jerusalem, ordered the attack; the Templars made several cavalry charges, but couldn't defeat Saladin's soldiers. When night fell there was a pause in the battle. At dawn the next day, July 4, exhausted and parched Christians headed down the hillside in search of water, and soon found themselves surrounded. Despite their exhaustion, the Templars launched several valiant cavalry charges, but they all failed. The Muslims steadily closed in and of the 250 Knights Templar at the battle, 230 were killed. Saladin took King Guy of Jerusalem prisoner and, with him, also captured the most highly valued religious relic in the kingdom, the True Cross.

The Long Fight Back

The Holy Land was lost, Jerusalem had no king, and the military orders had been left leaderless. In the summer of 1187 it seemed like the crusader presence in the Middle East was all but over. On Friday, October 2, 1187, a victorious Saladin entered Jerusalem. His first orders were to destroy the buildings put up by the Templars, in the area around the Al Aqsa Mosque, and to dismantle the large cross they had erected on the sacred Islamic shrine of the Dome of the Rock. According to the chronicler Imad al Din: "The Templars had built a wall before the *mihrab* [the alcove in the mosque to which Muslims address their prayers], reducing it to a granary, and, it

COUNTY OF EDESSA
Roche-Guillaume
Aleppo
Trapessac
Alexandretta
PRINCIPALITY OF ANTIOCH
Gaston
Cavea
Bakas Shogur
Arzghan
Apamea
Antioch
Roche de Roussel (Roissol)
Saint Simeon
Rochefort
Red Castle
Abu Qubais
Jabala
Latakia
Chateau de la Vieille
Belda
Eixserc
Krak des Chevaliers
Castellum Bochée
Homs
Lacum
Felicium
Arima
Chateau Blanche
Marqab
Tripoli
Tortosa
Ruad
Chateau Rouge
COUNTY OF TRIPOLI
Damascus
Chateau Neuf
Gastrie
Famagusta
CYPRUS
Limassol
Sidón
Tyron
Belfort
Chastellet
Hospital Mount Tyre
Montfort
Safed
Forbelet
Belvoir
Manuet
ACRE
Mount Tabor
Judin
La Fève (Al Fulah)
Amman
Castellum Regis
Nablus
Château Pèlerin
Caco
JERUSALEM
Quarantene
Maldoin
Castrum Arnaldi
Aqua Bella
Arsuf
Le Toron
Belmont
Ashkelon
Bethgibelin
Gaza
DAMASCUS EMIRATE
KINGDOM OF JERUSALEM
MEDITERRANEAN SEA
N

TOMBE LA NUIT
EUROPE
ASIA
AFRICA
AREA ENLARGED
Indian Ocean

Main **fortresses:**
- Templar
- Hospitaller
- Teutonic Order
- Headquarters of the military orders
- Port
- Main sea route followed by the crusaders
- Limit of crusader domains in 1144

DUELING CHRONICLES

THE MUSLIMS: FRIEND OR FOE?

Malicious rumors circulated about the Templars in medieval times; it was whispered that they were too friendly with their Muslim neighbors. It was even said that the Christian knights held secret meetings in which Muslim scholars passed on secret knowledge to them. The written testimonies of the era, however, suggest quite the opposite. In Christian chronicles the Templars are exalted, but their Muslim counterparts reviled them without exception, calling the order the worst enemy of Islam in the Middle East.

BATTLE BETWEEN CHRISTIANS AND MUSLIMS,
14TH-CENTURY MINIATURE

BRIDGEMAN/ACI

LUISA RICCIARINI/PRISMA

FINDERS AND KEEPERS OF HOLY RELICS

THE TEMPLARS carried out building work to convert the Al Aqsa Mosque into their headquarters. This gave rise to rumors that they had unearthed the treasures of the Temple of Jerusalem, hidden from the Roman army by the Jews. It was said that these included the Ark of the Covenant, the Tablets of the Law, the Holy Grail, and the Holy Shroud. Such claims were unlikely, but the Templars were the custodians of another important relic, what they believed to be the True Cross, the one on which Jesus was crucified. It had been found in the fourth century but lost during the Muslim conquest of Jerusalem. It then miraculously reappeared when the Christians recaptured the city in 1099, and finally disappeared in 1187, never to be found again.

was said, a latrine, in their evil-minded hostility. East of the *qibla* [the wall indicating the direction of Mecca, toward which Muslims pray] they had built a big house and another church. Saladin had the structures removed and unveiled the bridal face of the mihrab."

With the loss of Jerusalem and most of the cities in Palestine and Lebanon, the Templars also lost their main reason for being, and their role was called into question. Events had shown that the Templars could not keep the Holy Land in Christian hands. But the money kept flowing in from Europe, and this allowed the Templars to regroup and reorganize. To their relief they were further reinforced by the arrival of the Third Crusade in 1191, led by Richard the Lionheart, King of England. The Templars and the English monarch built a good relationship; Richard even sold them the Mediterranean island of Cyprus. But the Templars didn't know how to govern the island, and they soon gave it back, preferring to set their headquarters in the recently conquered city port of St. John d'Acre, commonly known as Acre.

BRITISH LIBRARY/SCALA, FLORENCE

THE VITAL PORT CITY OF ACRE

Acre was a strategic Mediterranean port for the whole Levant region. The city changed hands several times, and its capture by crusaders in 1191, shown here, deeply worried Saladin.

At the start of the 13th century the Templars were still recovering from the loss of Jerusalem and the fortresses that had fallen under Muslim control. But economic prosperity in Europe allowed the Templars to reinforce the castles they still held and to recruit new young knights. They also benefitted from a series of competent grand masters whose sensible actions in the first years of the new century allowed the Templars to recoup some of their lost prestige. The aristocracy once again saw the Templars as the main bastion of Christendom in the Holy Land.

In 1229 came a moment of Christian euphoria, when the German emperor Frederick II led a successful crusade and recovered Jerusalem through a negotiated peace agreement with its ruler, the Sultan of Egypt. A crucial part of the agreement stipulated that the Al Aqsa Mosque should remain open for Islamic worship. The Knights Templar were furious. They had hoped

DUBY TAL/AGE FOTOSTOCK

to return to their original headquarters, which they called the Temple of Solomon. The Templars began desperate actions against seemingly everyone—Muslims, the Knights Hospitaller (the Holy Land's other large religious military order), as well as various other groups of crusaders.

In 1243, after several years of confusion, the Templars managed to achieve a certain degree of stability, and they even returned to Jerusalem, where they planned to rebuild the walls Saladin had pulled down. It was, however, a short-lived recovery. Just one year later the Egyptian Mamluks, fierce warrior-slaves, took the city by storm. A few weeks later 348 Templars fought in the Battle of La Forbie, and only 36 survived; the head of the grand master was displayed on the gates of Cairo.

Hope from the East

Once again the Templars had proved unable to defend Jerusalem, and the future of the Christian presence in the Holy Land hung desperately in the balance. The end seemed imminent when hope came from an utterly unexpected quarter—the Mongol Empire. The Mongols advanced west from Asia, sweeping through the Islamic territories and, in 1258, capturing Baghdad and ending the influential Abbasid caliphate. According to some accounts, the last caliph was killed in a humiliating way: rolled up in a carpet and trampled by horses. The Mongol armies moved on to conquer Syria and settle in Palestine, but in 1260 they were finally stopped by the Mamluks, at the bloody Battle of Goliath's Well. In the following years all the Christian strongholds in the Holy Land fell: the Mamluks took Caesarea, Arsuf, Haifa, and Antioch. Then in 1291 the Mamluks conquered Acre, the Templars' headquarters. A furious siege had culminated

THE GREAT BASTION OF CRUSADERS

Acre was the last crusader capital in the Holy Land. All the military orders had headquarters here, though relations between the Templars, the Hospitallers, and the Teutonic Knights was not always peaceful.

> Of the 348 Knights Templar who fought in La Forbie against the soldiers of the Egyptian sultan, only 36 survived.

in an overwhelming attack on the stronghold, from which only a few Templars managed to flee. A crusader garrison was later stationed on the small island of Ruad, just under two miles off the coast from Tortosa (Tartus, in present-day Syria), which clung on until 1303. A few years before, in 1299, the crusaders had launched their last attempt to retake the holy sites. Allied with Mongols and Armenians, they defeated the Muslims at the battle of Wadi al Khazandar, near Damascus. The Templars even entered Jerusalem, before having to retreat from the Holy City after only a few days, never to return.

Epilogue in Paris

The Crusades had ended and the Templars were redundant. Their amassed riches were seized by various European kings who had persuaded the Pope to dissolve the Templar Order in 1312; its last grand master, Jacques de Molay, was executed in Paris in 1314. There the history of the Knights Templar ends and their legend begins. Founded to protect pilgrims, the Knights Templar had become the most important defenders of European interests in the Holy Land and the principal protagonists in a period of harsh confrontation between Muslims and Christians. This spirit was perfectly captured in Pope Innocent II's endorsement of the Knights Templar in 1139: "How many men, consecrating their hands to God in the blood of the infidels, after the sweat of combat, have earned the reward of victory: eternal life!"

JOSÉ LUIS CORRAL LAFUENTE
CORRAL IS A HISTORIAN AND NOVELIST SPECIALIZING IN THE MEDIEVAL PERIOD.

Learn more

BOOKS

The History of the Knights Templar: The Temple Church and The Templars
Charles G. Addison, Forgotten Books, 2008.

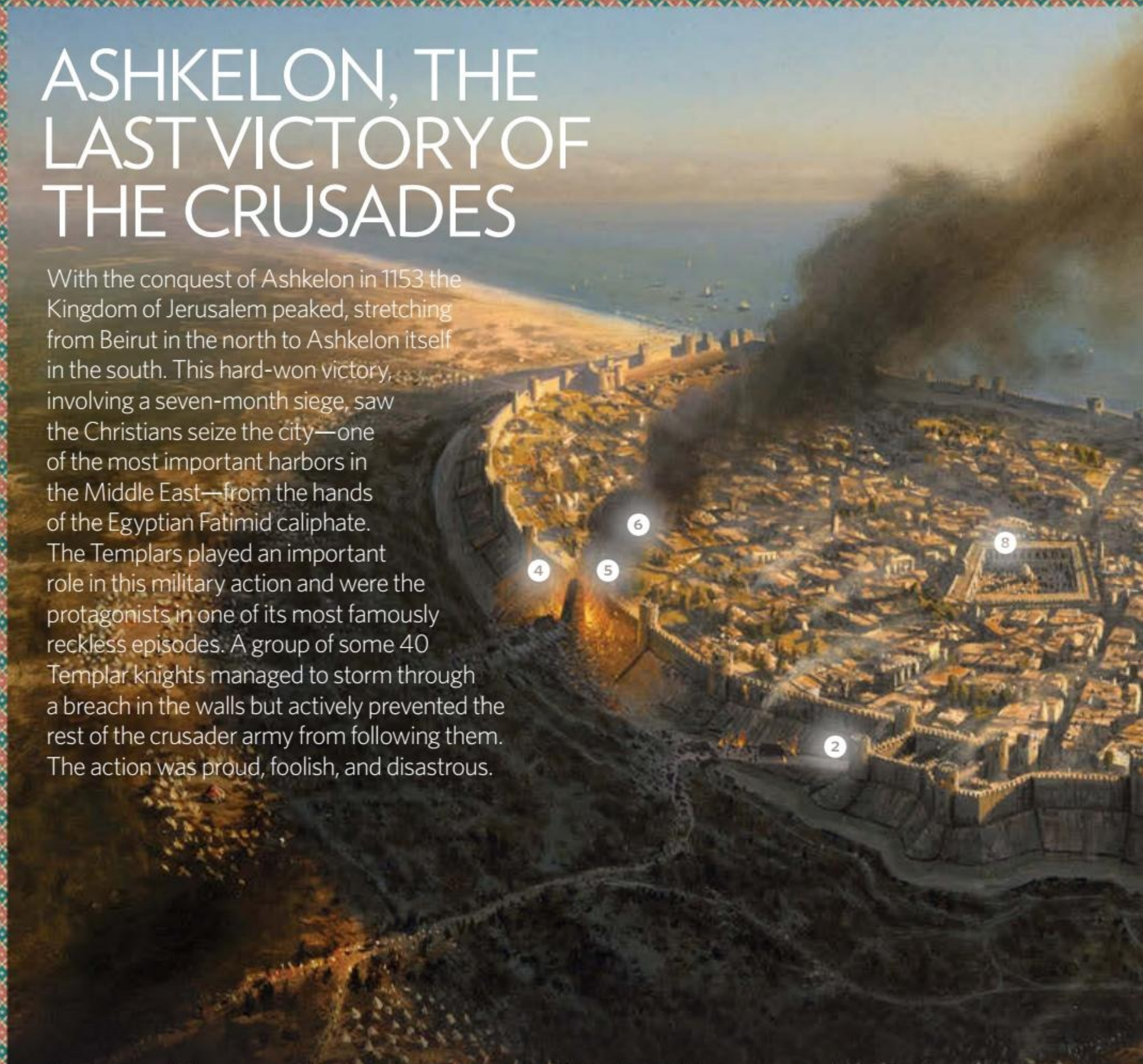
Secrets of the Knights Templar: The Hidden History of the World's Most Powerful Order
S. J. Hodge, Quercus, 2013.

BALDWIN III OF JERUSALEM
This painting shows Baldwin III, King of Jerusalem, accepting the surrender of the city of Ashkelon in 1153. Baldwin was a highly respected ruler who earned the affection of his subjects and the respect of his enemies. Commanding his barons without force and avoiding heavy taxation, contemporaries honored Baldwin with the title of "ideal king."

RENÉ-GABRIEL OJÉDA/RMN-GRAND PALAIS

ASHKELON, THE LAST VICTORY OF THE CRUSADES

With the conquest of Ashkelon in 1153 the Kingdom of Jerusalem peaked, stretching from Beirut in the north to Ashkelon itself in the south. This hard-won victory, involving a seven-month siege, saw the Christians seize the city—one of the most important harbors in the Middle East—from the hands of the Egyptian Fatimid caliphate. The Templars played an important role in this military action and were the protagonists in one of its most famously reckless episodes. A group of some 40 Templar knights managed to storm through a breach in the walls but actively prevented the rest of the crusader army from following them. The action was proud, foolish, and disastrous.



❶ *The Expedition*

On January 25, 1153, a Christian army arrived in Ashkelon. King Baldwin III of Jerusalem was accompanied by knights of the Templar and Hospitaller Orders, as well as secular and religious leaders. Among them were the Patriarch of Jerusalem; the Archbishops of Tyre, Caesarea, and Nazareth; and the Bishops of Bethlehem and Acre.

❷ *The Fortress*

From the sea, Ascalon appeared an impregnable semicircular fortress. The crusaders had defeated the Muslims there in 1099, but they hadn't managed to capture the city itself. In 1150 the Egyptian Fatimids who ruled Ashkelon reinforced the city's defenses with 53 towers, maintaining the fortress in perfect fighting condition.

❸ *The Reinforcements*

During Easter 20 boats landed near Ashkelon, offloading pilgrims who bolstered the crusaders' ranks. The huge size of the besieging army made it impossible to reinforce or supply the city by land. But a little after the pilgrims landed, the besieged were reinforced by 70 Fatimid ships bringing men, weapons, and provisions.

❹ *The Great Tower*

Among the war machines used by the crusaders was a great wooden siege tower that was taller than Ashkelon's wall. From it, they hurled rocks and burning logs into the city. One night in late July the Fatimid garrison managed to set fire to the tower, but the wind blew the burning mass toward the city, threatening its very walls.

CHRISTOPHER EVANS/NGS

5 ***The Templars***
Flames from the blazing siege tower opened a breach in the section of Ashkelon's wall assigned to the Templars. It seems that arrogance and ambition now took over. In an attempt to win all the glory and spoils, 40 Templars climbed in through the breach, while comrades kept other crusaders from joining the attack.

6 ***The Punishment***
Once inside, the bold Templars found themselves surrounded and were soon slaughtered. Meanwhile the defenders were able to repair the wall. The corpses of the Knights Templar were displayed on the walls as a warning to the invading army, while the leader of the garrison sent their heads as a gift to the Egyptian sultan.

7 ***The Surrender***
On August 19, after an intense bombardment, the Ashkelon garrison finally gave up. The fortress surrendered on condition that its inhabitants be allowed to safely leave the city with their belongings. From that point on Ashkelon became a part of the domains of Amalric, Count of Jaffa and brother of King Baldwin of Jerusalem.

8 ***The Mosque***
Under Amalric's rule, the mosque in the center of Ashkelon was transformed into a cathedral dedicated to Saint Paul. Saladin recovered the city in 1187, shortly after his victory at the Battle of Hattin. However, during the Third Crusade Saladin chose to demolish Ashkelon rather than allow the city to fall into Christian hands again.

In 1607 the English established their first permanent settlement in the New World. In just 19 days the colonists built a triangular fort, the foundation stone of what would become the United States of America.

HULTON ARCHIVES/GETTY IMAGES

BIRTHPLACE OF AMERICAN DEMOCRACY

JAMESTOWN

In the summer of 1619 the colonists of Jamestown did something extraordinary. Stricken by starvation and disease, they elected men to govern them. This unprecedented act sowed the seeds of representative government in America.

DEA/AGE FOTOSTOCK

It must have been with a deep foreboding that John Pory set off for Virginia in the spring of 1619. Not only was the Atlantic crossing a long and dangerous one, but, as newly appointed colonial secretary, he was expected to help revive the fortunes of a far-flung settlement on the edge of extinction. Even its current governor considered its condition "ruinous," and most thought it a lost cause. Pory arrived to find his worst expectations fulfilled. Jamestown, the colony's fortified capital, was in a dreadful state, full of desperadoes on the edge of starvation, skirmishing with the local Indians, and surviving on infrequent and unreliable supplies of food and equipment shipped from England. Then began a quiet revolution. A general assembly to represent the colonists was summoned, with Pory arranging the elections. Nothing like this had ever been attempted before, so Pory used the model he knew best: the House of Commons. And so, on a spit of swampy land jutting out into a wide, sluggish river, in the fierce heat of a sweltering summer, in a makeshift church that barely had the dignity of a garden shed, America acquired its first elected assembly and a taste for democracy.

Jamestown's story begins in the early 1600s. King James I of England wanted peace with Spain, so he banned provocative colonial

ROY MILES FINE/BRIDGEMAN/ACI

KING JAMES I OF ENGLAND, PAINTED IN HIS LIFETIME

COLONIZING VIRGINIA

1587
Sir Walter Raleigh establishes the colony of Virginia on Roanoke Island, intended to launch a Protestant British empire but the colonists disappear.

1607
Three small English ships arrive in Chesapeake Bay. They carry 108 exhausted, badly equipped, and poorly provisioned settlers who will found Jamestown.

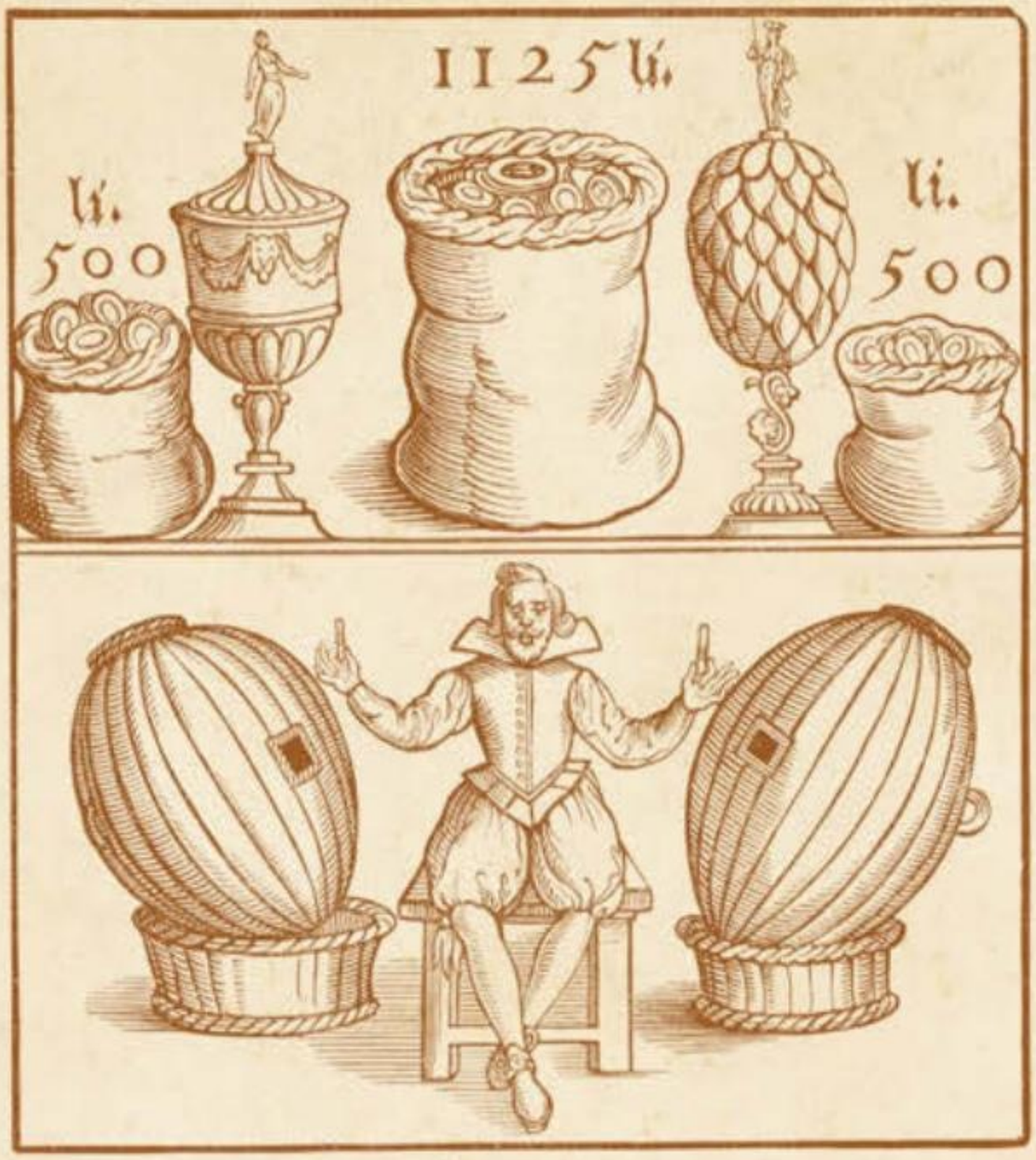
THE WINDING JAMES RIVER

To elude Spanish raiders the colony of Jamestown was established 35 miles from the sea. To avoid antagonizing the Indians, the colonists took the uninhabited, mosquito-ridden marsh on a river bend where salt water from the sea met waste from upstream, making the water filthy.

1612
The colony receives a new charter that introduces a tyrannical military regime. It also sees the arrival of the tobacco seeds that will transform its fortunes.

1619
Elections are held for representatives at a general assembly modeled on England's Parliament. The attending burgesses debate and pass laws for the colony.

GEORGE STEINMETZ/CORBIS/CORDON PRESS



STAPLETON COLLECTION/BRIDGEMAN/MCD

LIFE IS A LOTTERY

In 1612 a royal charter gave the London Company the right to hold a public lottery to raise funds for the starving settlers. Winning tickets could be exchanged for company shares.

expeditions to the Americas. Then, in 1606, a group of mariners and entrepreneurs approached the virtually bankrupt king and told him that Virginia could be a lucrative source of minerals and trade. If James let them launch a privately funded mission, they would cut him in on the profits. James agreed on the understanding that their expedition was strictly commercial—no nonsense about setting up a British empire. If Spain ever found out (which they did), James would deny all knowledge of it (which he did).

A joint stock corporation called the Virginia Company of London (also known as the London Company) was established, and after chaotic preparations a tiny fleet left London on December 20, 1606. It carried a motley crew of minor gentry, military veterans, and fugitives, including the explorer, ex-soldier and self-promoter Captain John Smith. They reached Chesapeake Bay on April 26, 1607, having used up their supplies on their grueling Atlantic crossing. After considerable argument they settled on a small peninsula 35 miles up a large and navigable river that they patriotically named the James. Here they put up tents, dug drainage ditches, and erected rudimentary defenses, grandly naming this bedraggled encampment James Town.

The colonists' initial letters and reports suggested they had found paradise. Mussels and oysters "lay on the ground as thick as stones," they reported. The rivers were full of fish, the forests full of deer, and the skies full of birds. Yet within three years, they were starving, reduced to eating dogs, rats, snakes, and the human "flesh and excrements" dug up from fresh burials.

From Feast to Famine

So what had gone so spectacularly wrong? The short answer is governance. The London Company decided that the colony would be run by a

BRIDGEMAN/MCD

John Smith is famous for a dubious yarn in which his life was saved by Pocahontas.

A PORTRAIT OF JOHN SMITH, CHARISMATIC EXPLORER AND COLONIST

THE MARINERS' MUSEUM/CORBIS/CORDON PRESS

POWHATAN'S INDIAN EMPIRE

THE AREA THE ENGLISH CALLED VIRGINIA, known locally as Tsenacomoco, was home to around 15,000 Powhatan Indians. They lived in small villages, usually surrounded by a defensive fence, growing maize and tobacco in nearby plots, and fishing and hunting in the rivers and forests. They worshipped a benign supreme creator known as Ahone, but the affairs of everyday life were governed by Okeus, a vengeful spirit who threatened to bring down "storms and thunderclaps" if neglected or slighted. He had to be pacified with regular sacrifices.

After an initial wariness, relations with the colonizers were generally cordial; the Powhatan wanted English copper and tools almost as much as the English needed the Indians' food. But in 1618 their paramount chief, Powhatan, died. His successor, Opechancanough, decided to retake the lands settled by the English, leading to the massacre of 1622 and additional attacks in 1644. After that the outlook for the Powhatan people was grim. By 1785 their language was all but lost and their domains reduced to little more than 50 acres.

THE MARINERS' MUSEUM/CORBIS/CORDON PRESS

① **"Inhabitants of Virginia"** pictures Indians wearing beads, feathers, and tattoos; with their hunting bows they were known to be deadly.

② **"Their Sitting at Meat"** shows an Indian man and woman feasting on corn, oysters, and fish. A pipe for smoking tobacco lies next to the man.

③ **"The Town of Secota in Virginia"** depicts a street of neatly arranged Indian dwellings and fields. A ceremonial dance is also shown.

LEEMAGE/GETTY IMAGES

A REPRODUCTION OF THE JAMESTOWN CHURCH WHERE THE GENERAL ASSEMBLY MET. A STONE FOUNDATION HAD BEEN LAID, BUT PLANS FOR A BRICK BUILDING HAD BEEN ABANDONED DUE TO LACK OF MEN AND MATERIALS. INSTEAD, IT WAS A WOODEN STRUCTURE 50 FEET LONG AND 20 FEET WIDE, WITH A THATCHED OR SLATTED ROOF.

VISIONS OF AMERICA/GETTY IMAGES

council of seven men whose identity would not be revealed until the expedition made landfall. This unleashed a ferocious power struggle during the voyage and resulted in a council made up of mortal enemies and that excluded men with the skills to make the colony a success. The bitter infighting intensified as supplies dwindled and relations with the local Indians soured.

The man who emerged from the chaos to assert some authority was John Smith. His epic explorations of the region had revealed that the English had planted themselves in the midst of a highly sophisticated and well-organized Indian empire. However, even Smith's hyperactive and domineering presence couldn't quell the faction fighting; severe injuries after a probable assassination attempt forced his return to England.

Other leaders came and went, but poor relations with the Indians, a failure to find anything of value, and lackluster efforts to grow crops for food resulted in the colony repeatedly coming to the brink of collapse, only to be saved by a supply vessel or short-term deal with the Indians.

In 1609 the almost bankrupt London Company frantically raised funds and drafted a new governing charter that called for the factious council in Virginia to be "utterly ceased" and replaced by a single governor heading a military-style administration. This resulted in more settlers, but little improvement in conditions. Indeed, those who had survived the years of anarchy now found themselves subject to a "tyrannous" military regime intent on reducing them to a state of "extreme slavery and misery."

Pory's Inheritance

This was the colony that John Pory found in 1619. Seventy thousand pounds had been spent on the venture, enough to finance a small war, yet after 12 years there was nothing to show but 400 hungry settlers scraping a living in Jamestown and a few other scattered settlements. They had one rotting old frigate, two small boats, and two small cannon "fitter to shoot down our houses than to offend an enemy." There was a brick building acting as the governor's house, otherwise most of the settlers were still living under canvas or in makeshift wooden huts. Even a brisk trade in the now flourishing tobacco crop served to revive the fortunes of the London Company rather than those of the colonists.

It was not a happy state of affairs, which is why the arrival of Pory and yet another governor, George Yeardley, was probably met more

TOBACCO FOR TRADE

JAMESTOWN'S ONLY SIGNS of growth were in the tobacco fields. Despite King James's disapproval of smoking and its effects, experiments and cultivation produced a brisk tobacco trade with England. This improved the fortunes of the London Company but not those of the colonists. They were forced to pay in tobacco for all the vital supplies sent from England, with the company exploiting its stranglehold over the shipments by paying a paltry price for the crop. By 1620 the colony was exporting up to 50,000 pounds of tobacco, and by 1630 this figure had risen at least six-fold. This fed a growing appetite in England, where many believed smoking to be medicinal, alleviating hunger, aiding relaxation, killing pain, and even curing cancer. By 1670 smoking tobacco was widely popular across all social classes.

ROBERT CLARK/NGS

EVERETT COLLECTION/AGE FOTOSTOCK

JOHN ROLFE TENDS A PATCH OF TOBACCO PLANTS, WEARING THE FINERY OF AN EARLY 17TH-CENTURY GENTLEMAN FARMER.

Tobacco Seeds

In 1612 John Rolfe planted a packet of tobacco seeds brought from Trinidad in the West Indies. It flourished in the Virginian soil, spreading like weeds.

The Plant

The tobacco plants Rolfe cultivated and experimented with had large and sharp leaves that grew up to three yards above the ground. These were harvested by hand.

The Product

The tobacco leaves were cured over a fire. When smoked in a clay pipe, the most common method, colonists described a "pleasant, sweet, and strong" taste.

FROM TOP TO BOTTOM: 1 R. KOBENG/AGE FOTOSTOCK, 2 STUDIO HEINEMANN/AGE FOTOSTOCK, 3 LUIS CASTAÑEDA/AGE FOTOSTOCK

A MODEL OF THE ENGLISH HOUSE OF COMMONS

JOHN PORY MODELED THE ASSEMBLY ON PARLIAMENT. The adversarial seating on either side of the church reflected the layout of the House of Commons. Also reflecting parliamentary practice, there was a speaker, probably in the aisle between the opposing pews, and a sergeant at arms "ready for any service the Assembly should command him." Parliament's purpose was to debate and approve laws and taxes on behalf of the king, who summoned and dismissed them. By 1619 tensions over money and rights saw James I ruling without Parliament, starting England on the path to civil war in 1642.

STAPLETON COLLECTION/BRIDGEMAN/MCI

THE HOUSE OF COMMONS
SHOWING THE SPEAKER, CENTER, FLANKED BY RIVAL FACTIONS

RULING THE ASSEMBLY

The speaker wielded power beyond his wealth and status. He ran the meetings, excercising the authority to decide who spoke when, guiding the debate and its outcome.

with resignation than hope. Pory, however, was a shrewd and effective organizer, and within a month had issued writs to all the "freemen and tenants" of each settlement, ordering them "by plurality of voices to make election of two sufficient men." These representatives, known as burgesses, were summoned on Friday, July 30, for Virginia's first "General Assembly."

The chosen venue was Jamestown church, a temporary wooden structure 50 feet long and 20 feet wide. The representatives filed in and were instructed by Pory to sit in the pews on one side of the church. Opposite them sat Governor Yeardley and his council of estate, six senior colonists appointed by the London Company. The meeting was conducted with all the pomp of a parliament. After prayers the burgesses were ordered into the church nave to be summoned back by name. They then "took the oath of Supremacy [to King James] and entered the Assembly" to begin formal proceedings.

The first order of business was the "Great Charter" that Yeardley had brought from London, which set out the colony's new administration. Some balked at questioning a document that the "Council and Company in England had already resolved to be perfect," but their worries were swept aside as the representatives, giddy with their new parliamentary powers, pored over it and suggested various improvements.

Developing a taste for this new authority, they turned to other areas, passing laws that allowed them to set the price of tobacco exports (antagonizing the London Company), prohibit attacks on Indians, and penalize the "idleness, gaming, drunkenness, and excess in apparel" shown by some colonists. They decided that up to six "of the better disposed of the Indians" should be allowed to inhabit English settlements. Each household was required to keep a spare barrel of corn, and orders were issued to plant mulberry trees, grapevines, and silk flax, and for trials with hemp and aniseed, to reduce the colony's dependency on tobacco. Proceedings continued for five days, the intensity of deliberations interrupted by a heat wave. Finally, on August 4, in the manner of the House of Commons, the session was dismissed. The eager burgesses agreed to reconvene on March 1 the following year.

The Assembly's Legacy

In the sweep of global history, the first meeting of Virginia's General Assembly appeared a minor affair. Even the Indian chiefs would have

THE FIRST ASSEMBLY

Very little is known about most of the members of America's first general assembly. They were probably a mix of rich and poor, highborn and lowborn, some willing and others reluctant. It's possible to piece together the lives and roles of four of them.

JOHN ROLFE was a key member of Yeardley's council and a veteran of the venture. His experiments in tobacco planting in 1612 and his marriage to Pocahontas in 1614 helped save the colony, and he became a champion of the enterprise, describing critics as "falsehearted, envious, and malicious." He died of natural causes just before the Indian Massacre of 1622.

GEORGE YEARDLEY became Virginia's new governor in 1619. Sir George was a Londoner who first sailed for Virginia in 1609 and ended up shipwrecked on the island of Bermuda. He was deputy governor of Virginia in 1616-17, establishing an extensive and lucrative thousand-acre estate which he named "Flowerdieu Hundred" after his wife.

JOHN PORY was a journalist, member of Parliament, and envoy who had traveled as far afield as Constantinople on various diplomatic and trade missions before setting off for America in 1619. As well as being the colonial secretary, he undertook explorations of the region, surveying the Potomac River up to what is now Washington, D.C.

WILLIAM POWELL is one of the few elected burgesses about whom we know anything. A former military captain, he was probably a veteran planter who had survived the winter of 1609-10, known as the Starving Time, and established a small plantation. One of his workers, Thomas Garnett, demanded his exclusion from the assembly on the grounds of "drunkenness and theft."

MPI/GETTY IMAGES - COLOR: SANTI PÉREZ

VIRGINIA HISTORICAL SOCIETY/BRIDGEMAN/ACI

THE INDIAN MASSACRE

On March 22, 1622, the Indians launched a surprise attack on the colony. About a quarter of the settlers were killed, and the survivors had to take refuge in Jamestown's rickety fort.

considered it of little consequence, since the English still depended upon them for survival. The question then arises: Could this really have been the seed that planted American values of democracy and political independence? Historians tend to play down the assembly's significance. But Pory's "little parliament" did reflect a fraught debate in England about representation in government and the relationship between rulers and their subjects. King James, now in a bitter power struggle with a rebellious House of Commons, came to see the Virginia enterprise as a "seminary for a seditious Parliament."

The general assembly's views also reflected a growing sense of belonging to a land in which many colonists were destined to spend the rest of their lives. This bond with the land was sealed in blood in 1622, when the Indians launched an all-out assault to extinguish the colony. When reports of the Indian massacre reached London, they were seized upon by enemies of the enterprise as evidence of its failure. A hostile pamphlet titled *The Unmasked Face of our Colony in Virginia* was presented to a receptive King James.

A copy of the pamphlet reached Jamestown early in 1623 and might have been expected to trigger another spasm of mutinous infighting. But this time the response was very different. At a meeting of the general assembly the document was read out. The representatives were outraged and drafted a forthright answer. They took particular offense at the author's claim that the settlement was full of "infectious Bogs and muddy Creeks." He "traduceth one of the goodliest rivers in the habitable world," they responded, their passion arousing a poetic fervor, "which runs for many miles together within upright banks, till at length, enlarged with the receipt of others, it beats on a sandy shore, and imitates the sea in greatness and majesty."

Evidently, since the founding of Pory's general assembly, the colonists' view of their political and geographical place in the world had shifted. They felt they were no longer explorers or interlopers, but inhabitants of this newfound world. They had expended their sweat and spilled their blood making Virginia theirs. Whatever their past mistakes, whatever problems they faced in the future, and whatever the rights and wrongs of colonial occupation, they now saw this land as their land.

BENJAMIN WOOLLEY
WOOLLEY IS THE BEST-SELLING AUTHOR OF *SAVAGE KINGDOM: THE TRUE STORY OF JAMESTOWN, 1607.*

THE FIRST SLAVES?

ONE OF THE BIGGEST CHALLENGES for American democracy has been the issue of slavery, which coincidentally began just a few weeks after the first meeting of the general assembly. A "Dutch man-of-war"—more accurately a pirate ship—called the *White Lion* arrived in Virginia in late August carrying "20 and odd Negroes, which the Governor and Cape Merchant bought [in return] for victuals." They were Angolans being shipped by a Portuguese slave trader, from Luanda to Mexico, and acquired by the captain of the *White Lion* when he looted the slave vessel off the Mexican coast.

These captives have become known as the first African Americans. But whether or not they were slaves during their time in Virginia remains controversial. Eleven of them were put in "ye service" of Abraham Peirsey, a planter with 200 acres in need of cultivation. This means they became his indentured servants, forced to work his land in return for food and lodging. This may have amounted to slavery, but these were the same terms being endured by English servants too (a source of ongoing resentment, and a subject of much discussion by the general assembly). Several, if not all, of the African Americans fulfilled their indentures (typically between three and seven years) and were made freemen. Some even went on to become planters in their own right. By 1620 there were 32 African Americans in Virginia, and in 1628 an additional 100 Angolans arrived. Their experience in growing tobacco in Africa would contribute greatly to the colony's success.

SHACKLES SUCH AS THESE WERE USED TO KEEP THE SHIP'S CAPTIVES IMMOBILIZED BELOW DECK.

M. GRAHAM-STEWART/BRIDGEMAN/ACI

THE "20 AND ODD" ARRIVE IN VIRGINIA IN THIS ENGRAVING MADE IN THE 18TH CENTURY.

FULTON ARCHIVE/GETTY IMAGES

THE FIRST PERMANENT ENGLISH SETTLEMENT

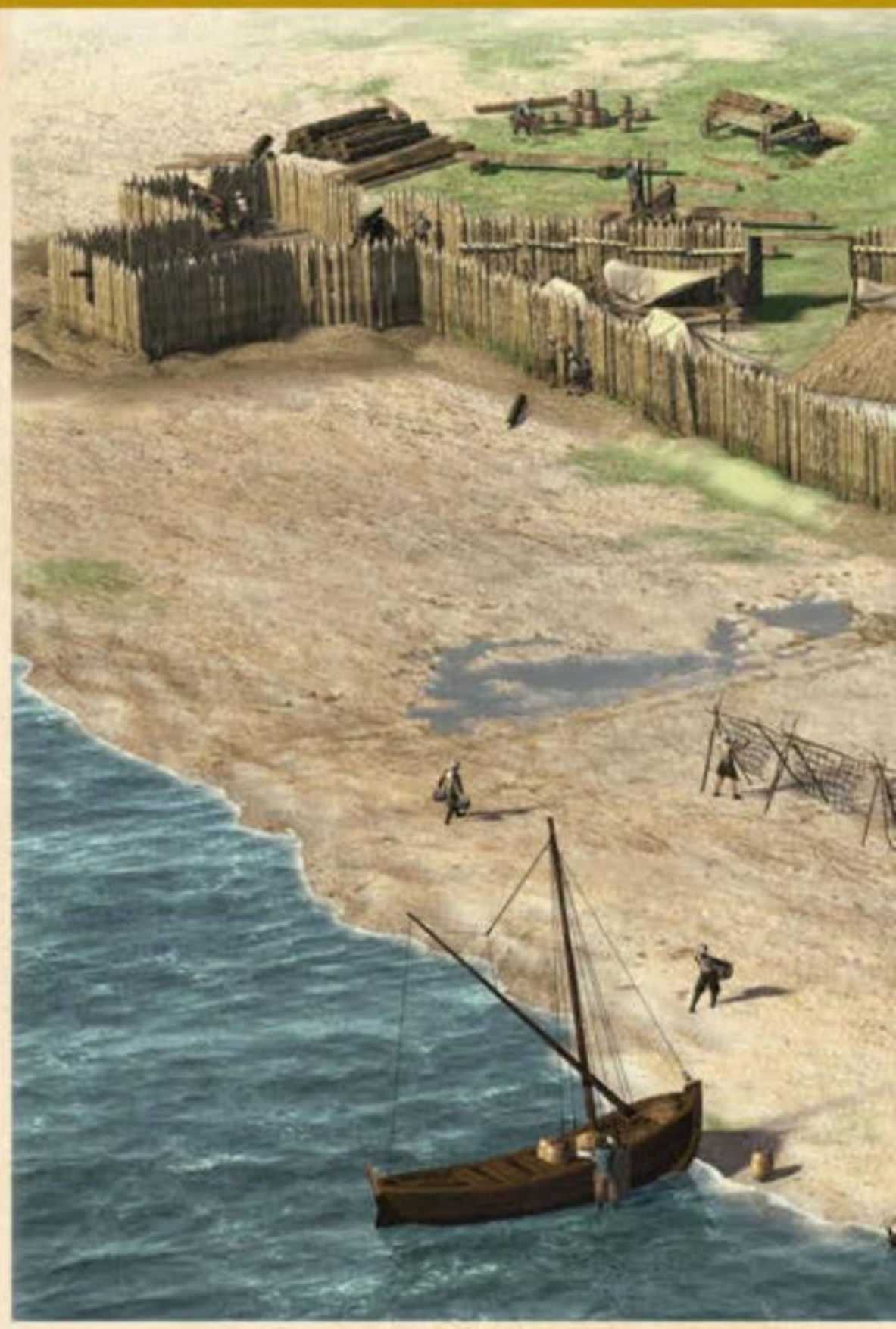
ROBERT CLARK/NGS

A TAG STAMPED WITH AN OLD SPELLING OF JAMESTOWN MARKED GOODS BOUND FOR THE COLONY.

That Jamestown would survive to become the New World's first permanent English settlement seemed unlikely in its first years. Strategically sited to evade Spanish attacks that never came, the colony was built on a marshy peninsula lacking freshwater. Relations with the Powhatan Indians were alternately cordial and hostile. Often trapped in their hastily built fort, the colonists suffered hunger and disease; within five months, nearly half were dead. But replacements kept arriving, and with good leadership, better Indian relations, and the success of tobacco plants the colony survived and thrived.

TRAVEL IMAGES/UIG/GETTY IMAGES

By 1619 the Jamestown fort had expanded into a five-sided structure, and after the 1620s the settlement grew beyond its fortified walls. Largely unmolested by the Indians, peace and prosperity allowed more permanent stone houses to be built, and in time the fort disappeared, until it was rediscovered by archaeologists in 1996.



Wooden Walls

Logs were driven into the ground to form a wall up to 15 feet high. The landward walls were 100 yards long, the riverside wall 140 yards, enclosing roughly an acre.

Strong Points

At the fort's corners were bulwarks mounted with cannon. These may have been effective against ships but made little impact on attacking Indians.

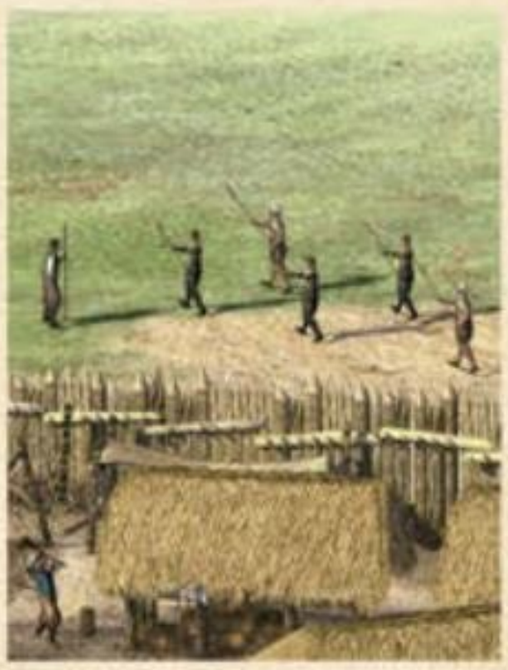
ADRIAN NIU/NGS

Drill Ground
The settlers prepared for attacks by the Spanish and Indians. They were armed with outdated armor and weapons, including swords, pikes, and matchlock firearms.

Lean-tos
As late as 1619 most colonists were still sleeping in damp holes covered by canvas tarpaulins, or in tents , lean-tos, and ramshackle wood huts.

The River
The river had cut a deep channel at Jamestown that allowed large ships to tie up close to land. Although the water was brackish, fishing was crucial.

Garbage Dump
Barely strong enough to bury their dead, settlers piled garbage inside the fort. By 1611, rules required that all wastes be disposed of outside its walls.



The Nasca Lines: An Enigma in the Desert

At ground level they appear to be meaningless scrapings in the dry soil. But from the sky the lines take on magnificent form as exotic birds and animals. Since their discovery in 1926 theories have abounded as to who created these enormous images 2,000 years ago—and why.

ROBERT CLARK/NGS

The pampas of Nasca are some of the driest places on the planet. Extending along the southern coast of Peru it forms a vast desert plain high above sea level. Within this lies an archaeological treasure that continues to confound researchers: the mysterious Nasca Lines.

Extending over an area 30 miles long and five miles wide, between the pampas of Nasca and Palpa, is a region covered by hundreds of straight, zigzagging, and trapezoidal lines called geoglyphs. But what has startled researchers and fired the world's imagination are that some of the lines, largely in the Pampa Colorada, join up to form drawings of animals, plants, and anthropomorphic beings: a condor, a hummingbird, and a pelican; a monkey, a spider, a lizard, and human hands. In total there are some 30 drawings of vast dimensions: the pelican is 935 feet long; the iguana over 600 feet long.

A Bird's-Eye View

Although the lines were noticed in 1547 by the Spanish conquistador Pedro Cieza de León, whose chronicles mentioned "signs" in the desert, the Nasca lines didn't arouse archaeological interest until 1926. It was then that the Peruvian archaeologist Toribio Mejía Xesspe was told of some mysterious markings on the ground near the Peruvian coast. He carried out the first on-site research, and concluded that they were Inca trails.

Then, in the 1930s, American anthropologist Paul Kosok made a trip to southern Peru. Standing at the top of the mesa to view the lines that crossed the pampa below, he decided to study them and proceeded to clean out some of the lines. As he did so he was astonished to find that one of the drawings took on the unmistakable shape of an enormous bird in flight. Kosok flew over Nasca in 1941, confirming that the full splendor of some of the geoglyphs could only be appreciated from the air. He came to the conclusion that the drawings were related to the constellations, solstices, and equinoxes; he became convinced that he was contemplating the largest astronomy book in the world. But Kosok's theory did not solve the mystery

ROBERT CLARK/NGS

THIS NASCA CERAMIC DEPICTS A HUMAN HEAD WITH A TREE SPROUTING FROM IT.

1926
Peruvian archaeologist Toribio Mejía Xesspe began the first field investigations of the Nasca pampas.

1941
American anthropologist Paul Kosok flies over the Nasca lines and forms the theory that they are an astronomical calendar.

1946
Maria Reiche begins to research Nasca, agreeing with Kosok's astronomical thesis. She devotes the next 52 years to the lines.

1997
Researchers corroborate Johan Reinhard's theory about the lines having a ritual meaning related to Nasca fertility rites.

THE HUMMINGBIRD figure on the Nasca pampas is 315 feet long and 217 from wing to wing. For the Nasca, the hummingbird was a messenger between men and the gods.

MARIA REICHE, THE "WITCH" OF THE PAMPAS

CORBIS/CORBIS PRESS

Maria Reiche had to fight against all sorts of obstacles and misunderstandings while researching the Nasca Lines. Reiche would work at night to avoid the glaring sun; the local people, seeing her leave with the brooms she used to clear the lines, became suspicious that she was performing some sort of witchcraft in the desert.

of who created the lines. Iconographic studies of the drawings were carried out, and they identified some design motifs that appeared in Nasca ceramics and weavings, linking the lines to the pre-Inca culture that developed in the region between A.D. 100 and 600. Carbon-14 dating has since corroborated this theory. The Nasca people drew these extraordinary designs with grooves dug into the ground at depths ranging from less than an inch to 11 inches, the lighter color of the subsoil making the drawings clearly visible. The composition of the soil, and the arid climate, with less than a liter of precipitation per year, have both contributed to their remarkable preservation.

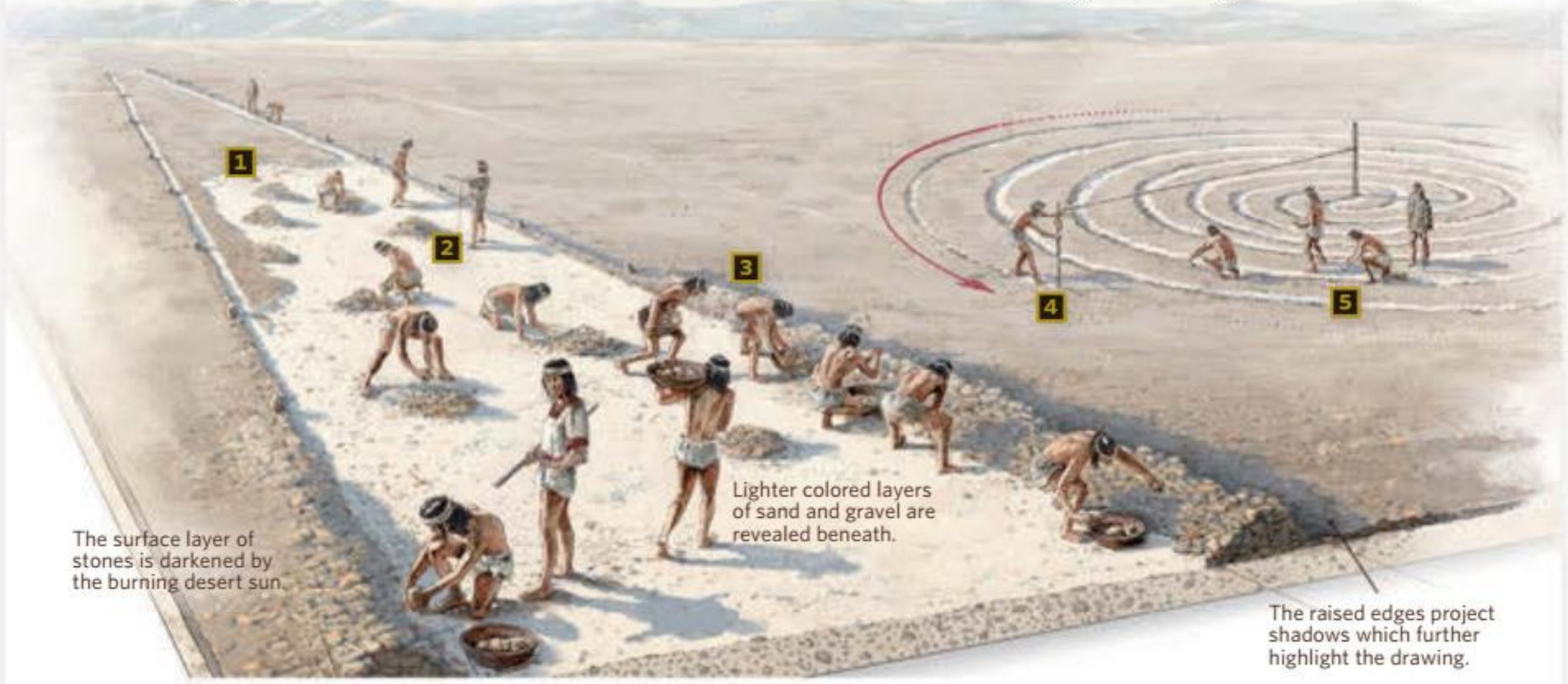
A Cosmic Calendar

In 1932 the German mathematician Maria Reiche moved to Peru, fleeing the economic depression and the rise of Nazism in her country. In Cuzco Reiche took a job as a governess to the German consul's children. Fascinated by Peruvian culture, she soon settled in Lima as a German teacher and later took a position at the city's National Museum of Archaeology, where she worked with the famous Peruvian archaeologist Julio C. Tello. There, in 1939, she met Paul Kosok, who in 1941 persuaded her to accompany him to Nasca to help in his investigations. From 1946 until her death in 1998, Maria Reiche devoted herself to the study and conservation of the Nasca lines. Like Kosok, she was convinced that they amounted to an immense astronomical calendar and that they were drawn to signal the appearance of certain stars that marked the sowing period. "They were built in association with the most frequent astronomical phenomena, registering the emergence of stars such as Sirius, Canopus, and Alpha Aurigae . . . functioning as a large-scale agricultural calendar," she recorded. Reiche laid out her theories in several highly successful books, including *Ancient Peruvian Contributions to Geometry and Astronomy,* published in 1968.

The perplexing fact that the lines can only be properly viewed from the air has given rise to all sorts of theories: In 1968 the Swiss writer Erich von Däniken claimed that they were landing strips for alien spaceships. But Reiche proposed another explanation: "Assuming that the creators of the lines couldn't fly, they could only imagine the full appearance of their works and must have planned and drawn them out ahead of time on a smaller scale." Others thought differently.

Making the Drawings in the Desert

BASED ON UNFINISHED GEOGLYPHS archaeologists believe they have discovered how the Nasca people drew the mysterious lines. This illustration shows their method for achieving both straight lines and spirals.


1
2
3
4
5
The surface layer of stones is darkened by the burning desert sun.
Lighter colored layers of sand and gravel are revealed beneath.
The raised edges project shadows which further highlight the drawing.

1 *Marks*
Stones mark out the lines, and a layer of dark rock is removed to define the border.

2 *Scrapings*
The area between the lines is scraped clear of rocks to reveal the lighter soil beneath.

3 *Edges*
The darker rocks are collected and spread along the edges to create elevated ridges.

4 *Central post*
A rope tied to a center post and a stick is let out in increments to draw a growing spiral.

5 *Second spiral*
A second spiral is added and the rocks removed to contrast light and dark areas.

FERNANDO G. BAPTISTA/NGM STAFF

In 1975 Jim Woodman and Julian Nott tried to demonstrate that the Nasca could undertake manned flights and may have supervised their workers from the air. Woodman and Nott used natural materials to build a hot-air balloon in an inverted pyramid shape. It ascended 380 feet before deflating and abruptly plummeting to earth, failing to prove this hypothesis.

Other Theories

In more recent years new theories have emerged that refute the astronomical interpretation argued by Kosok and Reiche. These include Tony Morrison's idea that the lines relate to hills and sacred sites and Alberto Rossell's claim that their function varied depending on their age, shape, and size. He suggested they marked out irrigation projects and divided agricultural plots.

But the most widely accepted theory comes from American archaeologist Johan Reinhard, who was an explorer-in-residence with the National Geographic Society from 1999 to 2013. In the mid-1980s Reinhard proposed that the lines were created to invoke water—sorely needed in a region as dry as Nasca—through fertility rites. According to Reinhard, the straight lines were ritualistic, and their function must have been to connect sacred sites or places of worship, such as mountain peaks where offerings would be made to the gods to bring them water. Research carried out by the Nasca-Palpa Project since 1997 seems to corroborate this hypothesis. It has proved that some of the lines point to underground canals, and has found that some small mounds in the region are littered with *Spondylus* shells, from mollusks known to be a religious fertility symbol.

The importance of water to the Nasca becomes apparent in the underground aqueducts they labored to build. But in the end neither their rituals nor their efforts to channel and store water saved them from an extreme drought that led to their disappearance. The impressive geoglyphs they left on the pampas are now also threatened: tourists, treasure hunters, and even climate change have put these archaeological treasures at risk. As Reiche passionately explained: "Shortly nothing will be left of this valuable legacy. We must take urgent measures to avoid their destruction."

CARME MAYANS

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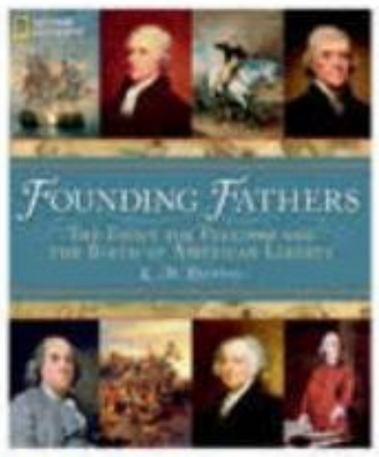
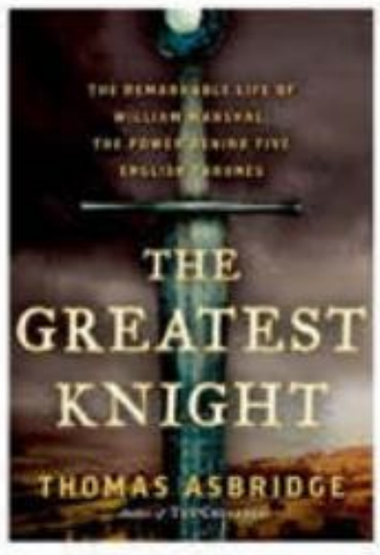
America's Fight for Freedom and Liberty



FOUNDING FATHERS
K. M. Kostyal
National Geographic, 2014, 350 pages

Founding Fathers tells the gripping story of America's 25-year journey from English colony to independent nation. The author focuses on the catalog of extraordinary leaders who created the country's democratic government almost from scratch. In so doing she brilliantly brings to life both the hard-fought and unlikely military victory of the War of Independence and the pioneering political insight of the men who future generations would celebrate as America's Founding Fathers. From the first stirrings of dissent a number of exceptional leaders emerged, and the narrative is punctuated with in-depth profiles of these great leaders. Among them are Washington, with his military acumen; Jefferson, Adams, Madison, and Hamilton, with their political vision; Henry's oratory, Paine's pen, and Franklin's diplomatic prowess. In the course of the book two histories emerge: the years of battles led by Washington that culminate in the surrender of Cornwallis, and the world inside young America's convention halls, where planning, argument, and groundwork produced the documents that would prove essential for the new nation. These documents—from the Declaration of Independence to the Articles of Confederation and the United States Constitution in 1787—are discussed in detail and the most important are helpfully reproduced in full. *Founding Fathers* is a visually stunning book that not only informs audiences new to the dramatic and often deeply moving events of the American Revolution but also rekindles interest in those wishing to revisit a stirring period in American history. ■

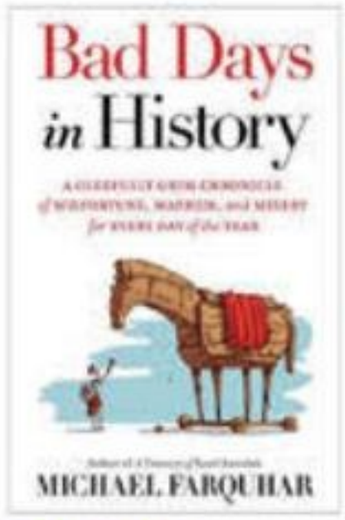
William Marshal: A Real-Life Lancelot



THE GREATEST KNIGHT
Thomas Asbridge
ECCO, 2014, 464 pages

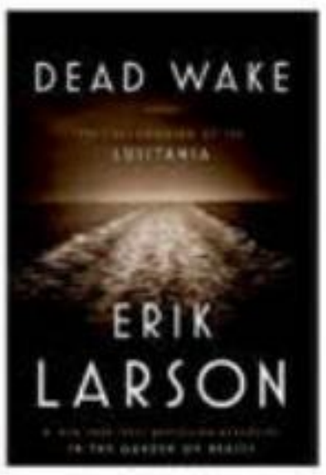
A fearless warrior and paragon of chivalry, William Marshal was everything you imagine a medieval knight to be. But his life was harder and more brutal than any romantic tale would ever allow. As a five-year-old boy Marshal was sentenced to execution and led to the gallows. He survived his brush with death and went on to train as a knight. Rising through the ranks, Marshal served at the right hand of five English kings; he became a celebrated tournament champion, baron, politician, and, ultimately, regent of the realm. He was friends with the great figures of his day, including the crusading king Richard the Lionheart and the infamous King John. Indeed Marshal helped to negotiate the terms of the Magna Carta—the first "bill of rights" that aimed to curb the excesses of the monarch. And then, at the age of 70, Marshal was forced to fight in the frontline to save the kingdom from French invasion in 1217. In *The Greatest Knight* renowned historian Thomas Asbridge draws upon an array of contemporary evidence to present a compelling account of William Marshal's life and times, from rural England to the battlefields of France, the desert castles of the Holy Land, and the verdant shores of Ireland. Charting the unparalleled rise to prominence of a man bound to a code of honor, yet driven by unquenchable ambition, this knight's tale lays bare the brutal realities of medieval warfare and the machinations of the royal court, drawing us into the heart of a formative period of English history. It is the story of a remarkable man, the birth of the knightly class, and the forging of the English nation. ■

So You Think You Had a Bad Day at the Office?



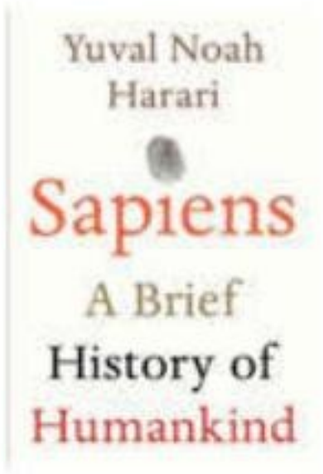
BAD DAYS IN HISTORY
Michael Farquhar
National Geographic, 2015, 480 pages

Germans have a handy word to define the guilty pleasure we obtain from learning about the troubles of other people—schadenfreude. *Bad Days in History* feeds this need perfectly with a story of misfortune for every day of the year. If you are having a particularly bleak Monday at work, take solace from what July 26, 1945, had in store for Winston Churchill. Having just led his country to victory in the bloodiest war humanity had ever witnessed, you might imagine his reelection as Prime Minister was absolutely assured. But the British public disagreed. After all the blood, sweat, and tears, Britain rejected Churchill's Conservative party in favor of the Labour party, with its welfare state and plans to level the class divide. When Churchill's wife suggested that his electoral defeat might be a blessing in disguise, he grunted that it seemed "quite effectively disguised." The book brings history right up to date with the case of Ronald Wayne, one of the co-founders of Apple. Weighing up the market, Wayne thought the time was right for him to sell his stake in the company—in 1976. Just a few years later Wayne's shares would be worth more than $30 billion. How much did Wayne get? $800. Even now when he looks back to that fateful decision Wayne insists that he made the right choice. With 365 such stories, *Bad Days in History* delivers exactly what its subtitle promises: "A gleefully grim chronicle of misfortune, mayhem, and misery for every day of the year," enough schadenfreude to keep everyone happy with unhappiness. ■



DEAD WAKE: THE LAST CROSSING OF THE LUSITANIA
Erik Larson
Crown, 2015, 448 pages

EVEN THOUGH many warships were sunk in the First World War, it was the loss of the luxury liner *Lusitania* that helped change the course of the conflict. Although the ship was sunk by a U-boat's torpedo, Larson considers that it's not just the German crew who are at fault.

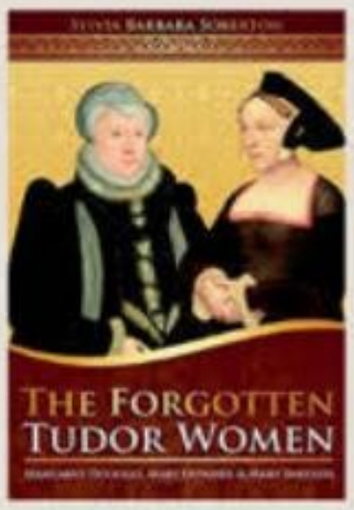


SAPIENS: A BRIEF HISTORY OF HUMANKIND
Yuval Noah Harari
Harper, 2015, 464 pages

READING A HISTORY of humankind sounds like a daunting endeavor, but Yuval Noah Harari manages to make it both informative and surprisingly entertaining. This is an essential read for anyone interested in who we are and how historical and biological events have shaped us.

TUDOR WOMEN BACK FROM THE FRINGES OF HISTORY

HENRY VIII had six wives and two daughters, but these were not the only women in his life. Elizabeth I, Mary Tudor, and Anne Boleyn are the subjects of many books, so Sylvia Barbara Soberton turns the spotlight on three other distinguished female figures who played an important role in the history of 16th-century England. Margaret Douglas was Henry's niece, Mary Howard married Henry's illegitimate son, and Mary Shelton was Henry's mistress; all have fascinating stories that deserve to be retold and remembered, while their biographies also offer fresh perspective on a time that was crucial in forming Great Britain.



THE FORGOTTEN TUDOR WOMEN
Sylvia Barbara Soberton
CreateSpace Independent Publishing Platform, 204 pages

Next Issue

JOHN BERKEWINGS

WHEN EUROPE MET THE CHEROKEE

17TH-CENTURY Europeans advancing into North America came to name the Cherokee one of the five "civilized tribes." Controlling 40,000 square miles of southern Appalachia, the Cherokee were a large and politically integrated people, farming in communities joined by kinship and culture. The impact of European settlement was ultimately tragic, but the story of the Cherokee is also one of heroic adaptability, embracing Western ways in everything from weaving to a written constitution.

GENGHIS KHAN: THE MAN BEHIND THE LEGEND

FEW COULD HAVE GUESSED that nine-year-old Temujin was destined for anything more than a harsh, short life on the desolate Mongolian steppes. His father had been murdered, and his mother could barely feed him, but Temujin was clever, charismatic, and a fighter. He grew up to become Genghis Khan, the man who unified the Mongol tribes into one of history's greatest powers. Striking terror into his enemies, Khan conquered lands from Asia to the Adriatic, forging the largest empire the world has ever known.

SOL 90/ALBUM

Curing Ancient Greece

If you had to fall sick in the ancient world, then Greece was the place to be. Greek doctors were knowledgeable and professional, with a code of practice still honored today.

The Slave Revolt that Rocked Rome

From a minor incident in a provincial city to a rampaging assault across Italy, with shocking victories against its legions, Spartacus's rebels struck terror into the heart of Rome.

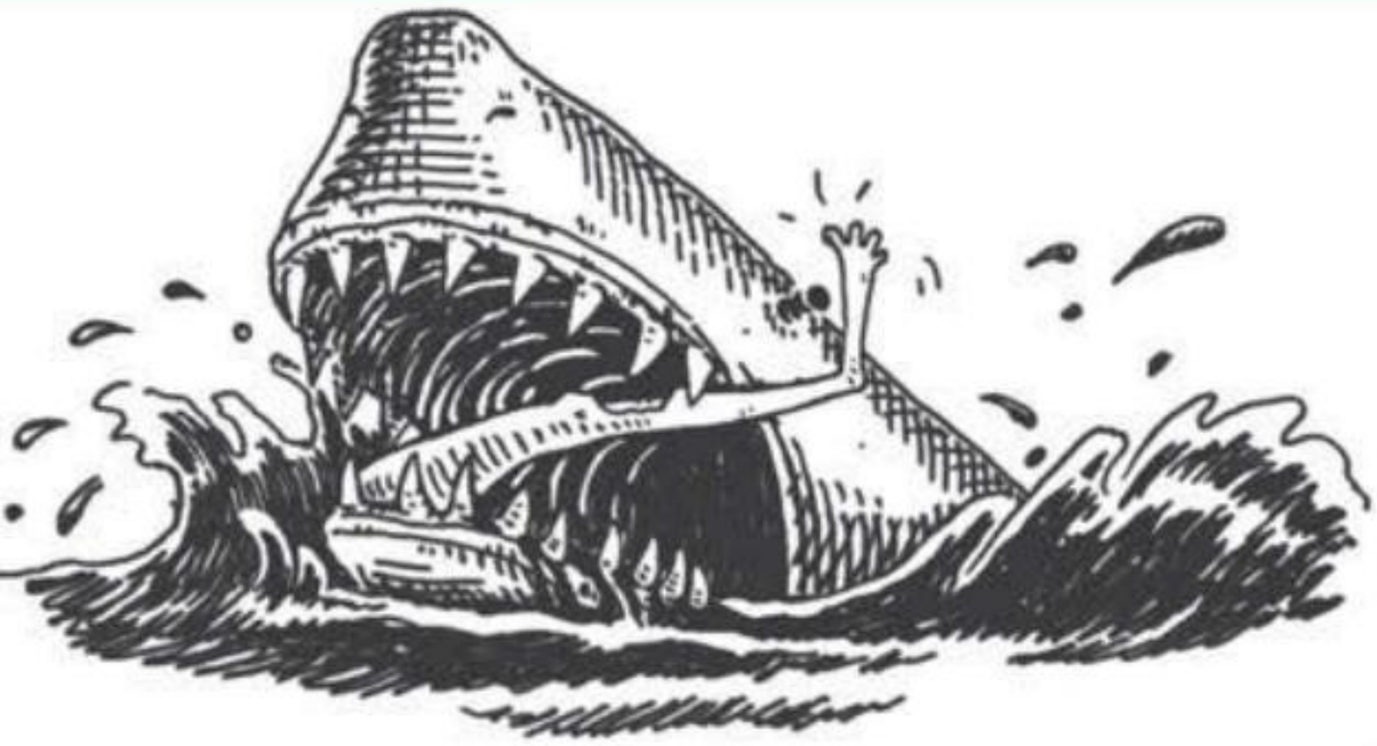
Arson in Alexandria?

The Library of Alexandria was arguably the greatest depository of ancient knowledge. It was all lost in a series of fires that experts believe were far from accidental.

Easter Island and the Giant Heads

An inhabited island far from any mainland is unusual enough, but one strewn with enormous carved figures of unknown origin is a fascinating mystery.

Think You're Having a Bad Day?
Trust Us, It Could Be Worse . . .

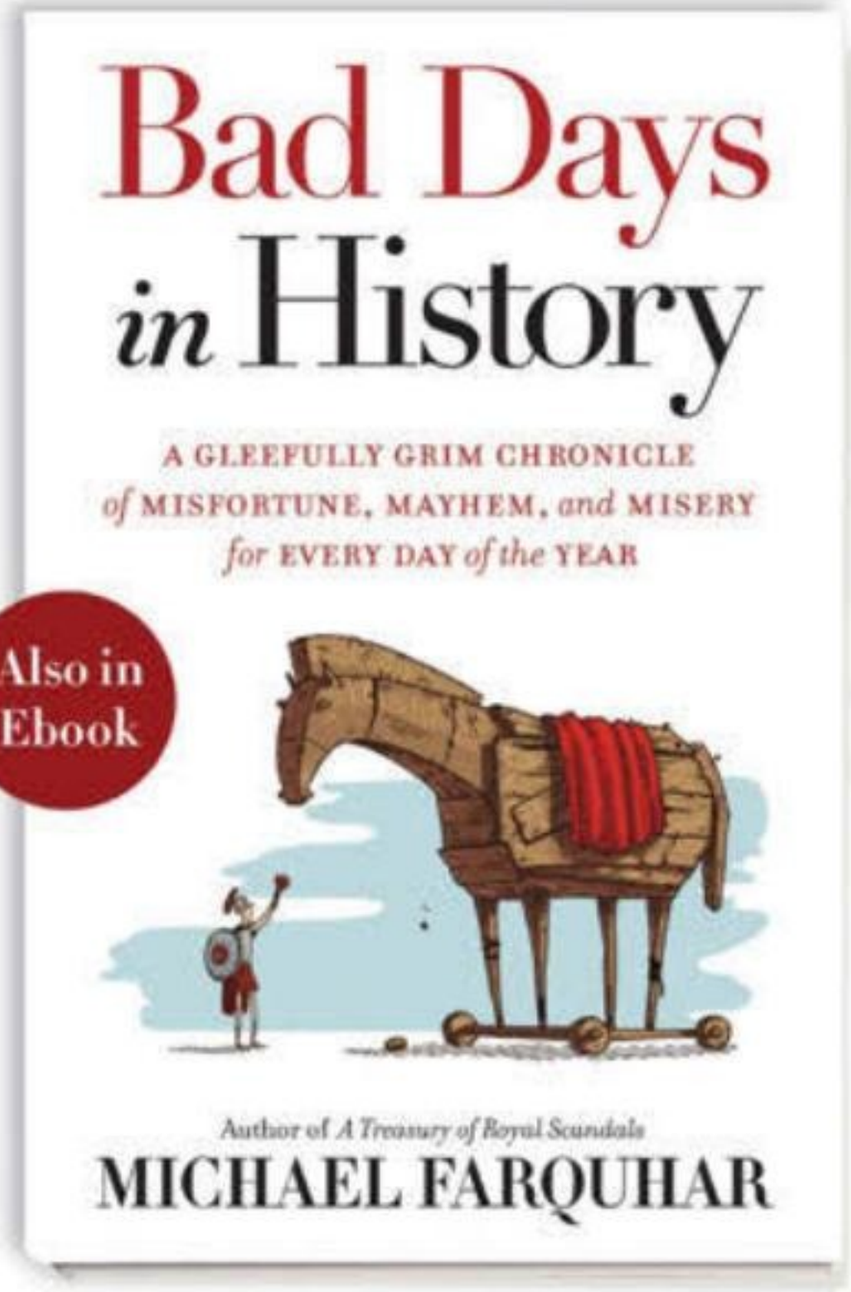


JULY 1, 1916 No Day at the Beach: In the Jaws of Death.

Charles Epting Vansant became an unwitting American original, in a most horrific way: he was the first to succumb to a shark attack in the nontropical waters of the continental United States.

JANUARY 1 Crappy New Year!

Fifth-century monk and martyr Telemachus stepped into the middle of a gladiatorial fight in Rome and tried to stop the human slaughter, only to be stoned to death by the bloodthirsty audience unappreciative of the effort.



History is full of struggle and triumph, determination and discovery, courage and revolution, and let's face it—some really, really bad days. In this wickedly entertaining book, best-selling author and historian Michael Farquhar chronicles the worst of the worst for each day of the year. The mishaps range from eyebrow raising to world changing—think Vegas hotelier Steve Wynn's unfortunate run-in with a priceless Picasso or Napoleon's frost-ridden, troop-depleting defeat in Russia.

For anyone who's had a rough time, this charming romp through history's gloomier side will be grand company.

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